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ABSTRACT

This document presents the hearings before the Subcommittee on Child and Human Development on the enactment of the Sudden Infant Death Syndrome (SIDS) Act Extension of 1978. The purpose of the hearing was to determine the effectiveness of the SIDS program which was established by Public Law 93-270, to determine how it can be improved or expanded, and to receive the most current information on research activities in the area of crib death. The text of S. 2523 and Public Law 93-270, witnesses' testimony, prepared statements, additional information and appended documents are provided. (Author/RH)

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Level II

SUDDEN INFANT DEATH SYNDROME ACT EXTENSION, 1978

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HEARING

BEFORE THE

SUBCOMMITTEE ON CHILD AND HUMAN DEVELOPMENT

OF THE

COMMITTEE ON HUMAN RESOURCES UNITED STATES SENATE

NINETY-FIFTH CONGRESS

SECOND SESSION

ON

S. 2523

TO AMEND TITLE XI OF THE PUBLIC HEALTH SERVICE ACT TO EXTEND APPROPRIATIONS AUTHORIZATIONS FOR 5 FISCAL YEARS

MARCH 1, 1978

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3

CONTENTS

Text of: Page

S. 2523 3

Public Law 93-270 4

CHRONOLOGICAL LIST OF WITNESSES

Wednesday, March 1, 1978

Richmond, Dr. Julius B., Assistant Secretary for Health, HEW, accompanied by Dr. Joyce Lashof, Deputy Assistant Secretary for Health Programs and Population Affairs; Dr. Norman Kretchmer, Director of the National Institute of Child Health and Human Development, National Institutes of Health; Dr. John Marshall, Deputy Director of the Bureau of Community Health Services, Health Services Administration; Dr. Eileen Hasselmeyer, NICHD; and Mrs. Geraldine Norris, HSA, a panel 7

Lefebvre, Nancy, president, International Council for Infant Survival, accompanied by Saul Goldberg, founder and honorary life board member, Guild for Infant Survival; Dr. Thoms M. Chase, SIDS parent, Auburn, Ala.; Philip Schaefer, SIDS parent, Belvedere, Calif.; and Carolyn Szybist, executive director, National Sudden Infant Death Syndrome Foundation, a panel 217

Dorsa, Patricia, M.S.N., project coordinator, New Jersey SIDS Program; Zoe Smialek, project coordinator, Michigan SIDS Information and Counsel Project; Dr. Francine Jensen, project director, SIDS Information and Counseling Project in the Houston area; and Mason H. Johnson, on behalf of Warren E. Hawes, M.D., chief, maternal and infant health section, California Department of Health. a panel 257

Johnson, Mason H., on behalf of Dr. Warren Hawes, project director, California Information and Counseling Project 271

Mandell, Dr. Frederick, assistant clinical professor of pediatrics, Harvard Medical School, Boston, Mass.; Dr. James Tuthill Weston, medical investigator, State of New Mexico; and Mason H. Johnson, senior coroners investigator, county of Los Angeles, a panel 309

Valdes-Dapena, Dr. Marie, professor, Department of Pathology, University of Miami, School of Medicine, Miami, Fla.; Dr. Richard L. Naeye, chairman and professor, Department of Pathology, Milton S. Hershey Medical Center, Pennsylvania State University; Albert C. Cain, Ph. D., Department of Psychology, University of Michigan; and Dr. Alfred Stein-Schneider, professor, Department of Pediatrics, University of Maryland School of Medicine, a panel 336

STATEMENTS

Cain, Albert C., Ph. D., professor, Department of Psychology, University of Michigan, prepared statement 356

California Information and Counseling Project, Dr. Warren Hawes, project director, prepared statement (with attachments) 274

Dorsa, Patricia, M.S.N., project coordinator, New Jersey SIDS Program; Zoe Smialek, project coordinator, Michigan SIDS Information and Counsel Project; Dr. Francine Jensen, project director, SIDS Information and Counseling Project in the Houston area; and Mason H. Johnson, on behalf of Warren E. Hawes, M.D., chief, maternal and infant health section, California Department of Health, a panel 257

Harris County Health Department, Francine Jensen, M.D., M.P.H., director, prepared statement 269

International Council for Infant Survival, Nancy Lefebvre, president, prepared statement 219

Page

Johnson, Mason H., on behalf of Dr. Warren Hawes, project director, California Information and Counseling Project — 271
- Prepared statement — 274

Lefebvre, Nancy, president, International Council for Infant Survival, accompanied by Saul Goldberg, founder and honorary life board member, Guild for Infant Survival; Dr. Thoms M. Chase, SIDS parent, Auburn, Ala.; Philip Schaefer, SIDS parent, Belvedere, Calif.; and Carolyn Szybist, executive director, National Sudden Infant Death Syndrome Foundation, a panel — 217
- Prepared statement — 219

Mandell, Dr. Frederick, assistant clinical professor of pediatrics, Harvard Medical School, Boston, Mass.; Dr. James Tuthill Weston, medical investigator, State of New Mexico; and Mason H. Johnson, senior coroners investigator, county of Los Angeles, a panel — 309
- Prepared statement — 311

Naeye, Richard L., M.D., professor and chairman, department of pathology, M. S. Hershey, Medical Center, the Pennsylvania State University, College of Medicine, Hershey, Pa., prepared statement — 349

National Sudden Infant Death Syndrome Foundation, Carolyn Szybist, R.N., executive director, prepared statement — 234

Richmond, Dr. Julius B., Assistant Secretary for Health, HEW, accompanied by Dr. Joyce Lashof, Deputy Assistant Secretary for Health Programs and Population Affairs; Dr. Norman Kretchmer, Director of the National Institute of Child Health and Human Development, National Institutes of Health; Dr. John Marshall, Deputy Director of the Bureau of Community Health Services, Health Services Administration; Dr. Eileen Hasselmeyer, NICHD; and Mrs. Geraldine Norris, HSA, a panel — 7
- Prepared statement — 12

Smialek, Zoe, project coordinator, Michigan SIDS Information and Counsel Project, prepared statement — 262

Valdes-Dapena, Dr. Marie, professor, Department of Pathology, University of Miami, School of Medicine, Miami, Fla.; Dr. Richard L. Naeye, chairman and professor, Department of Pathology, Milton S. Hershey Medical Center, Pennsylvania State University; Albert C. Cain, Ph. D., Department of Psychology, University of Michigan; and Dr. Alfred Steinschneider, professor, Department of Pediatrics, University of Maryland School of Medicine, a panel — 336
- Prepared statement — 338

Weston, James Tuthill, M.D., medical investigator, State of New Mexico, prepared statement — 318

ADDITIONAL INFORMATION

Articles, publications, etc.:
- Current listing of chapter presidents of the National Sudden Infant Death Syndrome Foundation — 45
- Directory of Affiliated Guilds for Infant Survival and Regional Representatives, 11th edition, February 1977, from the International Council for Infant Survival, Inc — 53
- "For Profit" groups with whom contracts have been let, and the amounts — 116
- Infant autopsy rate in SIDS Information and Counseling Project area 1976 date as reported by projects — 122
- Standardized microdate tape transcripts, from the National Center for Health Statistics, Department of Health, Education and Welfare — 125
- State-by-State review of SIDS activity as it relates to Public Law 93-270 — 241

Communications to:
- Cranston, Hon. Alan, a U.S. Senator from the State of California, from:
  - Richmond, Julius B., M.D., Assistant Secretary for Health, Department of Health, Education, and Welfare, March 22, 1978 (with enclosure) — 214
  - Weston, James T., M.D., medical investigator and professor of pathology, the University of New Mexico, School of Medicine, Albuquerque, N. Mex., March 24, 1978 (with enclosure) — 330

Communications—Continued

Page
Norris, Ms. Geraldine, director, SIDS Program, Office of Maternal and Child Health, Health Services Administration, from Drusilla Burnham, statistician, Mortality Statistics Branch, Division of Vital Statistics, Department of Health, Education, and Welfare, March 9, 1978 ... 124
Richmond, Hon. Julius, Assistant Secretary for Health, Department of Health, Education, and Welfare from Alan Cranston, chairman, Subcommittee on Child and Human Development, March 17, 1978 ... 212

Selected tables:

Amount of funds, number and percent distributions of NICHD grants and contracts on SIDS, fiscal year 1977 ... 27
Annual and cumulative awards, NICHD grants and contracts on SIDS fiscal years 1964–77 ... 28
Cost estimates for providing statewide coverage in areas not currently receiving SIDS information and counseling services as of January 1, 1978 ... 84
Funding distribution, by number and percent, of NICHD approved SIDS primary projects, fiscal year 1977 ... 32
Information and counseling project grants, January 1, 1978 ... 93
List of States with SIDS information and counseling projects that need expansion for State coverage as of January 1, 1978 ... 88
List of States with and without SIDS information and counseling service projects as of January 1, 1978 ... 39
List of States without Federal support for SIDS information and counseling services as of January 1, 1978 ... 86
NICHD obligations for research grants and contracts related specifically to SIDS—fiscal year 1977 ... 135
NICHD obligations for SIDS risk factor study contracts—fiscal year 1977 ... 37
NICHD research grant applications related specifically to SIDS reviewed by National Advisory Child Health and Human Development Council, Council years 1964–78 ... 31
Sudden infant death syndrome program support estimate ... 30
Summary of grant award activities sudden infant death syndrome information and counseling projects, fiscal years 1977–78 ... 91

Questions and answers:

Senator Cranston's questions for the Health Services Administration with responses ... 154
Zoe Smialek's responses to questions asked by Senator Cranston ... 301
Mason Johnson's responses to questions asked by Senator Cranston ... 304
Francine Jensen's responses to questions asked by Senator Cranston ... 306
Dr. Albert Cain's responses to questions asked by Senator Cranston (with enclosure) ... 371

APPENDIX

Information submitted by 206 Smialeck, project coordinator, Michigan Regional SIDS ... 378
  Physicians Must Show Compassion for SIDS Victims' Families, by John E. Smialek, M.D., from Michigan Medicine, vol. 76, No. 14 ... 400
  Toxicology and Sudden Infant Death, by J. E. Smialek, M.D., and J. R. Monforte, M.D., from the Journal of Forensic Sciences, vol. 22, No. 4, 1977 ... 401
  Bereavement Resource Association, Detroit, Mich., bulletin of ... 407
  Sudden Infant Death—A Professional's Personal View, by Zoe Smialek, R.N., project coordinator, Michigan Regional SIDS Center ... 411
  Methadone Deaths in Children—A Continuing Problem, by John E. Smialek, M.D., Joseph R. Monforte, Ph. D., Regine Aronow, M.D., and Werner U. Spitz, M.D., from JAMA, vol. 238, No. 23, December 5, 1977 ... 429
  Accidental Bed Deaths in Infants Due to Unsafe Sleeping Situations, by J. E. Smialek, M.D., P. Z. Smialek, P.H.N., and W. U. Spitz, M.D., from Clinical Pediatrics, vol. 16, No. 11, November 1977 ... 431
Sudden Infant Death Syndrome Project, New Mexico ... 437
Examination of the Sudden Infant Death Syndrome Infant: Investigative and Autopsy Protocols—Special Report, by A. M. Jones, M.D., and J. T. Weston, M.D., from the Journal of Forensic Sciences, vol. 21, No. 4, 1976 ... 440

Page
Death Investigation: An Analysis of Laws and Policies of the United States, Each State and Jurisdiction, as of January 31, 1977, from the Department of Health, Education, and Welfare, Public Health Service, Health Services Administration ---- 449
Prolonged Apnea, from the American Academy of Pediatrics, Task Force on Prolonged Apnea, Pediatrics, April 1978 ---- 580
Sudden Unexplained Infant Death, 1970–75—An Evolution in Understanding, by Marie Valdes-Dapena, professor, Department of Pathology, University of Miami, School of Medicine, Miami, Fla ---- 582
Correspondence between Senator Brooke and Senator Cranston, April 5 and 14, 1978 ---- 611
Text of S. 2522, as reported ---- 615
Excerpts from Senate Report No. 95–822 ---- 642

SUDDEN INFANT DEATH SYNDROME ACT EXTENSION, 1978

WEDNESDAY, MARCH 1, 1978

U.S. Senate,
Subcommittee on Child and Human Development
of the Committee on Human Resources,
Washington, D.C.

The subcommittee met, pursuant to notice, at 7:05 p.m., in room 4232, Dirksen Senate Office Building, Senator Alan Cranston (chairman of the subcommittee) presiding.

Senator Cranston. The hearing will please come to order.

First of all, I thank each and every one of you for being present at this hour for this hearing. I appreciate the cooperation of all the witnesses and others who have worked with us to arrange this. I regret the Senate schedule required an evening session, but it was the only way we could get our work done.

This evennig we are considering legislation, S. 2523, which I introduced on February 9, 1978, to extend the Sudden Infant Death Syndrome Act of 1974, Public Law 93–270.

Sudden infant death syndrome, otherwise known as SIDS—and sometimes referred to as "crib death"—is the leading cause of death of infants between the ages of 1 month and 1 year. In our country, some 7,000 infants each year—or about two infants in every thousand live births—are victims of sudden infant death syndrome. This sad loss of life strikes suddenly, without any apparent warning. The tragedy involves not only the death of the infant, but the immediate and often long-lasting, devastating effects upon the parents and families who are left with the loss and a sense of total bewilderment over the death.

Six years ago hearings were held by the Senate regarding the problem of sudden and unexplained infant deaths. As a result of those and subsequent hearings, the SIDS Act, Public Law 93–270, was passed, providing for support both of a research effort into the causes, and ultimately the prevention, of this tragic loss of life, as well as for the creation of a system of support and counseling services to the bereaved parents and families involved.

This act authorized the Secretary of the Department of Health, Education, and Welfare to establish a program of research in sudden infant death syndrome; to develop and disseminate educational materials on crib death; and to create a system of information and counseling projects to assist the families of SIDS victims.

We have made progress over the past several years in learning more about the nature of this problem. Researchers have found that the infants who fall victim to this mysterious disorder are not the normal, healthy babies they were once thought to be. They have been found to have various subtle physiological or anatomical changes which go undetected until after death. However, a specific change or lesion, common to all SIDS victims, has still not been identified. Thus, there is a continuing need for further research into the causes of this very serious problem.

We have, however, learned more about what happens when this tragedy strikes. Epidemiological investigations have demonstrated that crib death occurs more frequently between the second and fourth months of age, in premature infants and those of low birth weight, in male babies and babies born to mothers of less than 20 years of age, and in nonwhite infants and those of a deprived socioeconomic background.

SIDS claims its victims more often during normal sleeping hours, more often in the winter, and more often when the child is recovering from a slight upper respiratory infection. But with all this information, it is still not now possible to identify accurately the potential victim beforehand in time to save the infant.

In addition to looking into the causes and incidence of this tragic problem, the act provides for development and implementation of an educational and counseling program to help the families directly involved, as well as the general public, to understand the problems associated with sudden infant death syndrome.

The federally-sponsored information and counseling projects established under the act and voluntary parent groups have done much to educate the general public and those who themselves provide the health care services—physicians, nurses, law enforcement officials and others—and who come into contact with the SIDS victims and their families.

A few years ago some of the common complaints of SIDS parents and of others concerned with SIDS focused on the lack of information available on crib death, and the lack of knowledge, understanding, and compassion among the various service providers who came in contact with the bereaved parents after the loss of their infant.

Through the work of the information and counseling projects and the voluntary groups, much progress has been made in the area of public education and parent counseling. But there remains much more to be done, including providing services in those geographical areas where projects do not exist, improving the quality of the autopsies performed so that pathological changes peculiar to SIDS can be accurately identified, and coordinating the various supportive activities within the community.

The purpose of tonight's hearing is to determine the effectiveness of the SIDS program which was established by Public Law 93–270, to determine how it can be improved or expanded, and to receive the most current information on research activities in the area of crib death.

[The text of S. 2523 and Public Law 93–270 follows:]

95TH CONGRESS
2D SESSION

S. 2523

IN THE SENATE OF THE UNITED STATES

FEBRUARY 9 (legislative day, FEBRUARY 6), 1978

Mr. CRANSTON (for himself, Mr. WILLIAMS, Mr. JAVITS, and Mr. RIEGLE) introduced the following bill; which was read twice and referred to the Committee on Human Resources

---

A BILL

To amend title XI of the Public Health Service Act to extend appropriations authorizations for five fiscal years.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Sudden Infant Death Syndrome Act Extension of 1978".

SEC. 2. Title XI of the Public Health Service Act (42 U.S.C. 300c–11 (b) (5)) is amended by striking out in section 1121 (b) (5) "and" after "1977," and inserting before the period a comma and "and such sums as may be necessary for each of the next five fiscal years".

II

Public Law 93-270
93rd Congress, S. 1745
April 22, 1974

An Act

88 STAT. 90

To provide financial assistance for research activities for the study of sudden infant death syndrome, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Sudden Infant Death Syndrome Act of 1974.

SHORT TITLE

SECTION 1. This Act may be cited as the "Sudden Infant Death Syndrome Act of 1974".

42 USC 300c-11 note.

SUDDEN INFANT DEATH SYNDROME RESEARCH

SEC. 2. (a) Section 441 of the Public Health Service Act is amended by striking out "an institute" and inserting in lieu thereof "the National Institute of Child Health and Human Development".

76 Stat. 1072.
42 USC 289d.

(b)(1) Such section 441 is further amended by inserting "(a)" after "SEC. 441." and by adding at the end thereof the following:

"(b) The Secretary shall carry out through the National Institute of Child Health and Human Development the purposes of section 301 with respect to the conduct and support of research which specifically relates to sudden infant death syndrome."

42 USC 241.

(2) Section 444 of such Act is amended (1) by striking out "The Surgeon General" each place it occurs and inserting in lieu thereof "The Secretary", and (2) by striking out "the Surgeon General shall, with the approval of the Secretary" in the first sentence and inserting in lieu thereof "the Secretary shall, in accordance with section 441(b),".

76 STAT. 1073.
42 USC 289g.

(c)(1) Within ninety days following the close of the fiscal year ending June 30, 1975, and the close of each of the next two fiscal years, the Secretary shall report to the Committees on Appropriations of the Senate and the House of Representatives and to the Committee on Labor and Public Welfare of the Senate and the Committee on Interstate and Foreign Commerce of the House of Representatives the following information for such fiscal year:

Reports to congressional committees.
42 USC 289g note.

(A) The (i) number of applications approved by the Secretary in the fiscal year reported on for grants and contracts under the Public Health Service Act for research which relates specifically to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds.

58 Stat. 682.
42 USC 201 note.

(B) The (i) number of applications approved by the Secretary in such fiscal year for grants and contracts under the Public Health Service Act for research which relates generally to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds.

Each such report shall contain an estimate of the need for additional funds for grants or contracts under the Public Health Service Act for research which relates specifically to sudden infant death syndrome.

(2) Within five days after the Budget is transmitted by the President to the Congress for the fiscal year ending June 30, 1976, and for each of the next two fiscal years, the Secretary shall transmit to the Committees on Appropriations of the House of Representatives and

Funds, estimate, transmittal to congressional committees.

the Senate, the Committee on Labor and Public Welfare of the Senate, and the Committee on Interstate and Foreign Commerce of the House of Representatives an estimate of the amount requested for the National Institutes of Health for research relating to sudden infant death syndrome and a comparison of that amount with the amount requested for the preceding fiscal year.

COUNSELING, INFORMATION, EDUCATIONAL AND STATISTICAL PROGRAMS

86 Stat. 137, 650. 42 USC 300b. SEC. 3. (a) Title XI of the Public Health Service Act is amended by adding at the end thereof the following new part:

"PART C—SUDDEN INFANT DEATH SYNDROME

"SUDDEN INFANT DEATH SYNDROME COUNSELING, INFORMATION, EDUCATIONAL, AND STATISTICAL PROGRAMS

42 USC 300c-11. "SEC. 1121. (a) The Secretary, through the Assistant Secretary for Health, shall carry out a program to develop public information and professional educational materials relating to sudden infant death syndrome and to disseminate such information and materials to persons providing health care, to public safety officials, and to the public generally.

Grants. "(b)(1) The Secretary may make grants to public and nonprofit private entities, and enter into contracts with public and private entities, for projects which include both—

"(A) the collection, analysis, and furnishing of information (derived from post mortem examinations and other means) relating to the causes of sudden infant death syndrome; and

"(B) the provision of information and counseling to families affected by sudden infant death syndrome.

Applications. "(2) No grant may be made or contract entered into under this subsection unless an application therefor has been submitted to and approved by the Secretary. Such application shall be in such form, submitted in such manner, and contain such information as the Secretary shall by regulation prescribe. Each application shall—

"(A) provide that the project for which assistance under this subsection is sought will be administered by or under supervision of the applicant;

"(B) provide for appropriate community representation in the development and operation of such project;

"(C) set forth such fiscal controls and fund accounting procedures as may be necessary to assure proper disbursement of and accounting for Federal funds paid to the applicant under this subsection; and

"(D) provide for making such reports in such form and containing such information as the Secretary may reasonably require.

Payments. "(3) Payments under grants under this subsection may be made in advance or by way of reimbursement, and at such intervals and on such conditions, as the Secretary finds necessary.

"(4) Contracts under this subsection may be entered into without regard to sections 3648 through 3709 of the Revised Statutes (31 U.S.C. 41 USC 5. 529; 44 U.S.C. 5).

Appropriation. "(5) For the purpose of making payments pursuant to grants and contracts under this subsection, there are authorized to be appropriated $2,000,000 for the fiscal year ending June 30, 1975, $3,000,000 for the fiscal year ending June 30, 1976, and $4,000,000 for the fiscal year ending June 30, 1977.

"(c) The Secretary shall submit, not later than January 1, 1976, a comprehensive report to the Committee on Labor and Public Welfare of the Senate and the Committee on Interstate and Foreign Commerce of the House of Representatives respecting the administration of this section and the results obtained from the programs authorized by it."

Reports to congressional committees.

(b) The title of such title XI is amended by adding at the end thereof "AND SUDDEN INFANT DEATH SYNDROME".

Approved April 22, 1974.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 93-758 accompanying H.R. 11386 (Comm. on
Interstate and Foreign Commerce).
SENATE REPORT No. 93-606 (Comm. on Labor and Public Welfare).
CONGRESSIONAL RECORD:
Vol. 119 (1973): Dec. 11, considered and passed Senate.
Vol. 120 (1974): Jan. 21, considered and passed House, amended,
in lieu of H.R. 11386.
Mar. 6, Senate concurred in House amendments
with an amendment.
Apr. 10, House concurred in Senate amendment.

Senator CRANSTON. With this in mind, we open this evening's hearings with Dr. Julius Richmond, Assistant Secretary for Health, and representatives from the Department of HEW.

Dr. Richmond, we welcome you back on a matter which I know must be of real concern to you. And, Dr. Lashof, we are delighted to have you back with us again, this time we're at the opposite end of the day; we started very early the last time we were together.

Dr. Richmond, would you please introduce the other members of your panel and then proceed in whatever fashion you desire.

STATEMENTS OF DR. JULIUS B. RICHMOND, ASSISTANT SECRETARY FOR HEALTH, HEW, ACCOMPANIED BY DR. JOYCE LASHOF, DEPUTY ASSISTANT SECRETARY FOR HEALTH PROGRAMS AND POPULATION AFFAIRS; DR. NORMAN KRETCHMER, DIRECTOR OF THE NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT, NATIONAL INSTITUTES OF HEALTH; DR. JOHN MARSHALL, DEPUTY DIRECTOR OF THE BUREAU OF COMMUNITY HEALTH SERVICES, HEALTH SERVICES ADMINISTRATION; DR. EILEEN HASSELMEYER, NICHD; AND MRS. GERALDINE NORRIS, HSA

Dr. RICHMOND. Thank you, Senator Cranston. It is a deep pleasure to have this opportunity to be with you again.

In addition to Dr. Joyce Lashof, I have on my left Dr. Norman Kretchmer, who is the director of the National Institute of Child Health and Human Development; on his left is Dr. Eileen Hasselmeyer, who is chief of the Pregnancy and Infancy Branch of the National Institute of Child Health and Human Development, and chairperson of the DHEW Interagency Panel on SIDS; and on Dr. Lashof's right is Dr. John Marshall, deputy director, Bureau of Community Health Services in the Health Services Administration; and on his right is Mrs. Geraldine Norris, who is the national project director in the Health Services Administration for the SIDS project.

Senator Cranston, I first want to express our deep appreciation to you for your leadership in generating interest and support and directing attention to this very important problem.

Senator CRANSTON. Thank you, sir.

Dr. RICHMOND. I personally welcome this opportunity to appear here this evening because the problem we are addressing has been one of deep interest to me over many years; since some of my own personal research and clinical work early in my career involved studies leading to some of the more current concepts and investigations related to the sudden infant death syndrome.

In my years as a practicing pediatrician, and as a professor of pediatrics and child psychiatry, I don't think I have observed any other experience which is as shattering a personal tragedy for those families who, without warning, lose their seemingly healthy babies.

Mr. Chairman, I have been very pleased to note, and would like to have it in the record, that two of my former research fellows, Dr. Abraham Bergman and Dr. Alfred Steinschneider, have become leaders in the efforts to develop new knowledge and better services in this field. I think all of us interested in this field are deeply indebted to them and the many other workers who have labored in this vineyard trying to resolve this very difficult problem.

Each year in the United States sudden infant death syndrome claims the lives, as you have indicated, of an estimated 6 to 7 thousand infants who die suddenly, quietly, and unexpectedly in their cribs, during what has been considered to be normal sleep.

This is an incidence rate of about 2 per 1,000 live births. It is the leading cause of death between the ages of 1 and 12 months. As much as 50 percent of infant deaths occurring between the first month and first year of life in this country can be attributed to the sudden infant death syndrome.

I might note, Mr. Chairman, that we would reduce the current infant mortality rate by one-seventh, if we could just prevent these deaths from this one cause.

Since you made several observations concerning the data in connection with this syndrome, Mr. Chairman, I think I will move to specific comments concerning some of our research activities in this field.

Public Law 93-270 authorized a sudden infant death syndrome program which includes research, development and dissemination of educational materials, counseling to families, and the collection, analysis and furnishing of information relating to the causes of SIDS.

I would like to describe the department's activities in all of these areas. To start with, as you know, our research program is under the auspices of the National Institute of Child Health and Human Development. This program has as its objectives, first, to increase the understanding of the causes and underlying mechanisms of the syndrome; second, to identify the infants at risk of becoming victims; third, to explore preventive approaches; fourth, to elucidate the impact of a sudden and unexpected infant death on the parents, siblings and the extended family; and lastly, to inform the scientific and general community about SIDS.

The research emphasis areas include developmental neurophysiology, autonomic disturbances, and sleep rate; respiratory, laryngeal, cardiac functions and response to stimuli; metabolic, endocrine and genetic factors; immunology and infection; epidemiology, anatomic pathology; and the behavioral facets of the problem.

As a result of institute-supported investigations during these past 6 years, it is evident that SIDS babies are not the healthy infants before death they were once believed to be. These infants appear to have subtle anatomic and physiologic defects—which may originate in-utero—of a neurologic, cardiorespiratory, or metabolic nature.

There is increasing evidence that the syndrome is not caused by a single mechanism acting at one moment in time, as previously believed. Rather, a number of developmental, environmental, and pathological factors are involved. Under a complex set of circumstances, these interact and rapidly set up a sequence of events producing a sudden, unexpected and usually unexplained infant death.

Evidence that these infants have preexisting difficulties includes anatomic, pathologic findings suggestive of chronic stress and hypoxia; abnormalities in sleep state, cardiorespiratory function, and tissue—oxygen utilization; postnatal growth retardation; and the infant's temperament and behavioral patterns between birth and death.

In 1977 the Institute began a cooperative case-control study of SIDS. About 600 cases of SIDS, as defined by an autopsy protocol developed for this study, will be investigated.

Case-control comparisons for each factor under study will determine the extent of SIDS risk associated with the factor. It is anticipated that as a result of this project it will be possible to identify high-risk infants on the basis of information available at birth and in the period shortly after birth.

I would make the prediction, Mr. Chairman, that this cooperative case-control study will lead us to some very important data concerning the genesis of this disorder which we do not now understand fully.

We have contracted also for the development of an inexpensive prototype respiratory-cardiac, electronic monitor for use in the home on high-risk and near-miss infants.

We expect the risk factor study to enable identification of SIDS high-risk infants at birth and in the early weeks postpartum. Home monitoring of heart and respiratory regulation during sleep will further delineate risk.

The 1978 budget provides funds to support research, first, to better define the time and type of developmental insult that results in SIDS, with particular attention to antecedents in fetal life; second, to unravel the complexities of the pathophysiologic events being observed in subsequent siblings of SIDS and near-miss infants as clues to SIDS; and third, to focus on the effects of infant death on parents and siblings with a beginning emphasis on the grief-guilt reaction.

The President's fiscal year 1979 budget requests $10.4 million to continue to approach the problem of SIDS through its seven identified SIDS emphasis areas, as well as through a broader research approach involving studies of high-risk pregnancy, investigations of fetal development and maturation of specific systems and research into the process of adaptation of the newborn to the extrauterine environment and subsequent health problems.

In the area of service projects, we are currently providing support to 32 sudden infant death syndrome informational and counseling service projects located in 27 States. Of these, 29 are continuing projects and 3 are receiving support for their first year of operation. We anticipate the award of an additional 12 new SIDS projects in 1978. They provide services which are accessible to a population base of approximately 126 million people.

It is estimated that 54 percent of the sudden infant death syndrome deaths for 1978 will occur in geographic areas for which these projects are responsible and approximately 3,500 families will be offered assistance which includes early and periodic counseling.

Until recently only a small number of infants who died suddenly and unexpectedly were autopsied to confirm the cause of death and to learn more about the conditions contributing to the tragic event. In contrast, 17 of our projects report an autopsy rate of 80 percent or higher. In 10 projects, 7 of which are statewide, virtually all infants who die suddenly and unexpectedly are autopsied.

Informational and educational activities are directed at health professionals, public safety officials, and others to help acquaint them with the problems faced by SIDS families as well as to educate the general public and those who may come in contact with the problem.

The three motion picture films produced in the early years of the sudden infant death syndrome program continue to be internationally used and well received. "After Our Baby Died" sensitizes health professionals to their responsibilities to sudden infant death syndrome families: "You Are Not Alone" was prepared for the survivors of this crisis and the public in general. Copies of these films are being used by the projects, community mental health centers, institutions of higher learning, and voluntary organizations.

The film entitled "A Call for Help" instructs law enforcement officers and others who respond to emergencies in how to interact with families at the time of their crisis in a sensitive and nonaccusatory manner.

We have also used the television media to sensitize the public to the sudden infant death syndrome. Two brief public service telecasts were distributed in September 1977, to 300 major television stations in the United States. A report on the use of these telecasts by 200 stations indicates they were viewed in 42 States by an audience of approximately 122 million.

The publication and distribution of printed materials related to sudden infant death syndrome continues to be an important means of communicating the most recent information about this problem, its significance, causes, effects, and approaches to care. Approximately 500,000 pieces of 20 publications were distributed to a broad circle of concerned health service organizations, institutions of higher learning, health and emergency care providers, voluntary organizations, and the public. In the past year, the federally funded sudden infant death syndrome projects have conducted more than 2,000 educational programs.

I want to mention that our contract activities have been a vital adjunct to the program. These include a recently completed review and analysis of State statutes affecting the medico-legal investigation of sudden, unexplained deaths in infants. Findings have been published and distributed in a publication entitled "Death Investigation: An Analsyis of Laws and Policies of the United States, Each State, and Jurisdiction."

My prepared testimony, Mr. Chairman, describes these in greater detail.

During fiscal year 1979, with our budget request of $2,802,000, the program will continue to support information and counseling projects which will enable 4,000 families to receive early and periodic counseling—500 more families than received services this year.

Eventually we hope to implement a nationwide program so that services comparable to those provided in the current project areas are available for any family affected by a sudden and unexpected infant death. The need to continually assess and improve the quality of services remains a major program objective, utilizing the outcomes and recommendations of the evaluation and toxicology studies, program—monitoring activities, and research findings.

A longer range objective is to apply research findings in an orderly and timely manner, so that ultimately sudden infant death syndrome deaths may be prevented. We anticipate that as the causes associated with or responsible for these deaths are identified, then prevention, screening, identification, and medical management will become a reality. This, of course, has been the dream of all the workers in this field.

Mr. Chairman, you have introduced a bill, S. 2523, which proposes to extend the Sudden Infant Death Syndrome Act. We support a 3-year extension of this authority at the appropriation levels previously mentioned for fiscal year 1979 and "such sums as may be necessary" for the 2 subsequent years. We are committed to continued improvements in the quality and effectiveness of our research efforts and program activities.

I thank you again for inviting us to present the Department's concerns regarding this program. My colleagues and I will be happy to answer any questions you may have, Mr. Chairman.

[The prepared statement of Dr. Richmond follows:]

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

STATEMENT

BY

JULIUS B. RICHMOND, M.D.

ASSISTANT SECRETARY FOR HEALTH

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

BEFORE THE

SUBCOMMITTEE ON CHILD AND HUMAN DEVELOPMENT

COMMITTEE ON HUMAN RESOURCES

UNITED STATES SENATE

WEDNESDAY, MARCH 1, 1978

MR. CHAIRMAN, MEMBERS OF THE SUBCOMMITTEE:

I welcome the opportunity to appear here this evening. My earlier research work involved study of the Sudden Infant Death Syndrome (SIDS) -- the problem has long been of interest to me. In my years as a practicing pediatrician, I don't think I have observed any other experience which is as shattering a personal tragedy for those families, who without warning, lose their seemingly healthy babies.

I want to introduce the other Department officials with me: Dr. Joyce Lashof, Deputy Assistant Secretary for Health-Programs and Population Affairs; Dr. Norman Kretchmer, Director of the National Institute of Child Health and Human Development, National Institutes of Health; and Dr. John Marshall, Deputy Director of the Bureau of Community Health Services, Health Services Administration.

Each year in the United States, the sudden infant death syndrome claims the lives of an estimated six to seven thousand infants who die suddenly, quietly, and unexpectedly in their cribs, during what has been considered to be normal sleep. This is an incidence rate of about two per one thousand live births. It is the leading cause of death between the ages of one and twelve months--as much as 50 percent of infant deaths occurring between the first month and first year of life in this country can be attributed to the sudden infant death syndrome.

Characteristics of SIDS

Although the cause of death for these babies remains a mystery, we have documented well the characteristics of the SIDS baby, the mother of the SIDS victim, and their environments. We consistently find that the peak incidence of SIDS--and this is true in other countries as well--is between the second and fourth months of life. We know that the risk is higher in males than in females, in black babies than in white babies, in one of twins as compared to single born babies, in low birth weight infants and particularly in infants whose gestational ages at time of birth were between 34 and 35 weeks, and in babies who have had recent upper respiratory infections.

Research has demonstrated that the highest rate of SIDS is among mothers less than twenty years old; the older the mother the lower the risk of sudden death for her baby. Moreover, the risk for crib death is more than four times as great for those infants whose mothers received no prenatal care in comparison to mothers beginning their prenatal care early in pregnancy. The incidence of SIDS is highest in families of low socio-economic status. In addition, a higher rate of SIDS occurrence has been observed among infants of mothers who smoke than among infants of mothers who do not smoke. Most infants die at home in their cribs or carriages. The frequency of SIDS deaths in the United States is greatest during the cold weather months, and between 12 midnight and 8:00 a.m. than during other time periods.

P.L. 93-270 authorized a Sudden Infant Death Syndrome program which includes research, development and dissemination of educational materials, counseling to families, and collection, analysis and furnishing of information relating to the causes of SIDS. I would like to describe the Department's activities in all of these areas.

Research Advances

With its emphasis on research for mothers and children, the National Institute of Child Health and Human Development has provided an ideal milieu for advances in understanding the phenomenon of the sudden infant death syndrome--a problem which it is now evident relates to the broader areas of high risk pregnancy, fetal development, the birth process, and early infancy.

The objectives of our SIDS research program are:

- -- to increase the understanding of the causes and underlying mechanisms of the syndrome;
- -- to identify the infants at risk of becoming victims;
- -- to explore preventive approaches;
- -- to elucidate the impact of a sudden and unexpected infant death on the parents, siblings and the extended family; and
- -- to inform the scientific and general community about SIDS.

The research emphasis areas include developmental neurophysiology, autonomic disturbances, and sleep state; respiratory, laryngeal, cardiac functions and responses to stimuli; metabolic, endocrine, and genetic factors; immunology and infection; epidemiology, anatomic pathology; and the behavioral facets of the problem.

Since 1972, the National Institute of Child Health and Human Development has annually increased its research efforts in the sudden infant death syndrome resulting in an expanded base of knowledge about this phenomenon. As a result of Institute-supported investigations during these six years, it is evident that SIDS babies are not the healthy infants before death they were once believed to be. These infants appear to have subtle anatomic and physiologic defects--which may originate in-utero--of a neurologic, cardiorespiratory, or metabolic nature.

There is increasing evidence that the syndrome is not caused by a single mechanism acting at one moment in time, as previously believed. Rather, a number of developmental, environmental, and pathologic factors are involved. Under a complex set of circumstances, these interact and rapidly set up a sequence of events producing a sudden, unexpected and unexplained infant death.

Evidence that these infants have preexisting difficulties includes anatomic pathologic findings suggestive of chronic stress and hypoxia; abnormalities in sleep state, cardiorespiratory function, and tissue oxygen utilization; postnatal growth retardation; and the infant's temperament and behavioral patterns between birth and death.

Investigators are currently studying the role of many normal and abnormal phenomena to SIDS, such as development of sleep state, and cardiopulmonary regulation during sleep; interrelationships among heart rate variability, respiratory rate variability, and sleep state; the infants' ventilatory response to carbon dioxide; cardiac arrhythmias; sleep deprivation; hypoglycemia, laryngospasm; anemia in potentiating apnea; effects of acute metabolic conditions on central nervous system (CNS) development, organization, and function; CNS dysfunction above the brain stem; abnormalities of the carotid body; inability to metabolize free fatty acids; deficiencies in vitamin E or selenium; lack of secretory component of bronchopulmonary mucosa; nasal obstruction; cardio-vascular instability; the biogenic anime metabolism.

In 1977, the Institute began a cooperative case-control study of SIDS. About 600 cases of SIDS, as defined by an autopsy protocol developed for this study, will be investigated. Case-control comparisons for each factor under study will determine the extent of SIDS risk associated with the factor. It is anticipated that as a result of this project it will be possible to identify high-risk infants on the basis of information available at birth and in the period shortly after birth.

We have contracted for the development of an inexpensive prototype respiratory-cardiac electronic monitor for use in the home on high-risk and near-miss infants.

We expect the risk factor study to enable identification of SIDS high-risk infants at birth and in the early weeks post-partum. Home monitoring of heart and respiratory regulation during sleep will further delineate risk. The combination of risk-factor and monitoring data will make a SIDS prevention program feasible.

The 1978 budget provides funds to support research (1) to better define the time and type of developmental insult that results in SIDS, with particular attention to antecedents in fetal life, (2) to unravel the complexities of the pathophysiologic events being observed in subsequent siblings of SIDS and "near-miss" infants as clues to SIDS, and (3) to focus on the effects of infant death on parents and siblings with a beginning emphasis on the grief-guilt reaction.

The President's FY 1979 budget requests $10.4 million to continue to approach the problem of SIDS through its seven identified SIDS emphasis areas, as well as through a broader research approach involving studies of high-risk pregnancy, investigations of fetal development and maturation of specific systems and research into the process of adaptation of the newborn to the extrauterine environment and subsequent health problems.

Service Projects

We are currently providing support to thirty-two sudden infant death syndrome informational and counseling service projects located in twenty-seven States. Of these twenty-nine are continuing projects and three are receiving support for their first year of operation. They provide services which are accessible to a population base of approximately 126 million.

It is estimated that 54% of the sudden infant death snydrome deaths for 1978 will occur in geographic areas for which these projects are responsible and approximately 3,500 families will be offered assistance which includes early and periodic counseling.

Until recently only a small number of infants who die suddenly and unexpectedly were autopsied to confirm the cause of death and to learn more about the conditions contributing to the tragic event. In contrast, seventeen of our projects report an autopsy rate of 80% or higher. In ten projects, seven of which are statewide, virtually all infants who die suddenly and unexpectedly are autopsied.

Informational and Educational Activities

Informational and educational activities are directed at health professionals, public safety officials and others to help acquaint them with the problems faced by SIDS families as well as to educate the general public and those who may come in contact with the problem.

The three motion picture films produced in the early years of the sudden infant death syndrome program continue to be internationally used and well received. "After Our Baby Died" sensitizes health professionals to their responsibilities to sudden infant death syndrome families. "You Are

Not Alone" was prepared for the survivors of this crisis and the public in general. Copies of these films are being used by the projects, community mental health centers, institutions of higher learning, and voluntary organizations. The film entitled "A Call For Help" instructs law enforcement officers and others who respond to emergencies in how to interact with families at the time of their crisis in a sensitive and nonaccusatory manner. This film, which was distributed by the International Association of Chiefs of Police, was booked for 459 showings in 51 States with an estimated audience in 1977 of 13,700. We have also used the television media to sensitize the public to the sudden infant death syndrome. Two brief public service telecasts were distributed in September 1977 to 300 major television stations in the U.S. A report on the use of these telecasts by 200 stations indicates they were viewed in 42 States by an audience of approximately 122 million and a contributed time value of $61,604.

The publication and distribution of printed materials related to sudden infant death syndrome continues to be an important means of communicating the most recent information about this problem, its significance, causes, effects, and approaches to care. Approximately 500,000 pieces of twenty publications were distributed to a broad circle of concerned health service organizations, institutions of higher learning, health and emergency care providers, voluntary organizations and the public.

In the past year, the Federally funded sudden infant death syndrome projects have conducted more than 2,000 educational programs. The interdisciplinary approach is basic to the success of the sudden infant death syndrome program. The projects also are conducting in-depth and on-going training seminars with those groups most involved with providing sudden infant death snydrome services. We think it is important to note that the topic of sudden infant death syndrome and its associated effects is becoming increasingly evident in the curricula of numerous health disciplines, emergency service providers, and law enforcement programs.

I want to mention that our contract activities have been a vital adjunct to the program. These include:

-- a recently completed review and analysis of State statutes affecting the medico-legal investigations of sudden, unexplained deaths in infants. Findings have been published and distributed in a publication entitled "Death Investigation: An Analysis of Laws and Policies of the United States, Each State and Jurisdiction";

-- a currently funded study which will provide recommendations for toxicological studies in cases of sudden infant deaths and will define the protocols for conducting the toxicological analysis;

-- completion of a two-year effort to mobilize the necessary resources of sudden infant death syndrome programs in areas not presently providing these services with Federal assistance;

-- development of a training module suitable for basic training or in-service programs for law enforcement and emergency service providers; and

-- design and testing of a methodology for evaluation of the sudden infant death syndrome projects; the second phase of this effort will implement the evaluation study and analyze the findings.

During fiscal year 1979, with our budget request of $2,802,000 the program will continue to support information and counseling projects which will enable 4,000 families to receive early and periodic counseling--500 more families than received services this year. Eventually we hope to implement a nationwide program so that services comparable to those provided in the current project areas are available for any family affected by a sudden and unexpected infant death. The need to continually assess and improve the quality of services remains a major program objective--utilizing the outcomes and recommendations of the evaluation and toxicology studies, program monitoring activities, and research findings. A longer range objective is to apply research findings in an orderly and timely manner so that ultimately sudden infant death syndrome deaths may be prevented. We anticipate that as the causes associated with or responsible for these deaths are identified, then prevention, screening, identification and medical management will become a reality.

Conclusion

Mr. Chairman, you have introduced a bill, S. 2523, which proposes to extend the Sudden Infant Death Syndrome Act. We support a three-year extension of this authority at the appropriation levels previously mentioned. We are committed to continued improvements in the quality and effectiveness of our research efforts and program activities.

Thank you for inviting me to present the Department's concerns regarding this program. My colleagues and I welcome any questions you may have.

Senator CRANSTON. Thank you very much for your very informative and helpful testimony.

I do have quite a few questions, as I assume you expected. First, what is the present 1978 funding level of SIDS research, both the total amount and, separately, the amount for intramural and extramural research?

Dr. RICHMOND. I wonder if I might ask Dr. Hasselmeyer or Dr. Kretchmer to answer that question.

Dr. KRETCHMER. The extramural activities for SIDS research total $10,400,000 in the 1979 budget. The intramural activities are more difficult to estimate, but that would approximate about a million dollars in intramural, or related research.

Senator CRANSTON. What percent of this money is in the form of grants and what percentage in the form of contracts?

Dr. KRETCHMER. I don't know offhand—

Senator CRANSTON. Could you give us that for the record if you don't know?

Dr. KRETCHMER. Certainly.

Senator CRANSTON. I would also like to ask in that connection if the proportion has remained relatively constant over the years, and whether you contemplate changes in this ratio in fiscal 1979 or later.

Dr. KRETCHMER. Oh, no. In fact, the figure has not remained relatively constant. In the beginning there were many more contracts than grants directly related to SIDS which we utilized to stimulate the field, and now there are many more grants than contracts.

I will supply the exact figures for the record.

Senator CRANSTON. Will there be a change in the ratio in the figure?

Dr. KRETCHMER. I would hope and suspect there will be more investigator-original activities—in other words, even more grants—than contracts.

Senator CRANSTON. How much of this money is being spent on research projects primarily related to SIDS, and how much on research projects secondarily related to SIDS?

Dr. KRETCHMER. It breaks at about 50 percent each, a little more than $4.672 million directly related to SIDS, and somewhere in the range of about $5 million generally (subsidiarily), related to SIDS—SIDS doesn't appear in the title.

Senator CRANSTON. How many approved research grants went unfunded in fiscal 1977 and will be unfunded this year?

Dr. KRETCHMER. In fiscal 1977 we had a total of 16 approved SIDS primary grants: 11 were funded and 5 were not funded.

In fiscal 1978, as of our last National Advisory Council meeting—and we have one more coming up in May—there were a total of nine grants approved. So far—four have been paid, and five at the moment remain unfunded.

Senator CRANSTON. Getting back to the division between money spent on research projects, primarily and secondarily related, what are the projections for the 1979 budget year in that respect?

Dr. KRETCHMER. They still would divide about 50–50.

Senator CRANSTON. About 50 percent?

Dr. KRFTCHER. Yes, in each category.

Senator CRANSTON. In regard to the unfunded grants, what percentage of approved grants does this represent for both years?

Dr. **Kretchmer**. In fiscal 1977 approximately 68 percent of the approved SIDS primary grants were funded which I might say is higher than our general average. And so far, for 1978, it represents a matter of approximately 45 percent.

For the record, the NICHD general approval rate for 1977 was about 30 percent of those approved. In 1978 we'll probably be on the order of 33 percent.

Senator **Cranston**. Dr. Lashof, when we were asking this same information on family planning, it was about 30 percent, wasn't it?

Dr. **Lashof**. That's correct.

Senator **Cranston**. How much additional money would be needed to fund all the grants that are pending and approved?

Dr. **Kretchmer**. All of the grants?

Senator **Cranston**. Yes. If you don't know, could you provide it for the record?

Dr. **Kretchmer**. NICHD estimates that in fiscal year 1978 the Institute will have approximately 760 grant applications which will be approved but not funded. It is estimated that $74.5 million would be needed to fund all of these unfunded applications. The estimates for fiscal year 1979 are 774 grants totaling $76 million.

[The following information was subsequently supplied by Dr. Kretchmer for the record.]

Amount of Funds, Number and Percent Distributions of NICHD Grants and Contracts on SIDS, FY 1977

Support	Total		Funds (thousands)			
			Primary		Subsidiary	
	Funds	Percent	Funds	Percent	Funds	Percent
Total	$9,704	100.0	$4,672	100.0	$5,032	100.0
Grants	7,124	73.4	2,093	44.8	5,032	100.0
Contracts	2,580	26.6	2,580	55.2	-	-

Support	Total		Number of Projects			
			Primary		Subsidiary	
	Projects	Percent	Projects	Percent	Projects	Percent
Total	112	100.0	41	100.0	71	100.0
Grants	97	86.6	26	63.4	71	100.0
Contracts	15	13.4	15	36.6	-	-

NICHD-OPE-SAS
March 8, 1977

Annual and Cumulative Awards, NICHD Grants and Contracts on SIDS
FY 1964 - FY 1977

Fiscal Year	Funds (thousands)						Number of Projects		
	Total		Primary		Subsidiary		Total	Primary	Subsidiary
	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative			
				Total Grants and Contracts					
1964	$I,173	$1,173	$23	$23	$1,150	$1,150	55	2	53
1965	1,634	2,807	18	41	1,616	2,766	64	1	63
1966	2,127	4,934	242	282	1,886	4,651	63	3	60
1967	2,314	7,248	208	490	2,106	6,758	73	3	70
1968	2,060	9,308	81	571	1,979	8,737	64	1	63
1969	2,196	11,504	87	658	2,109	10,846	59	2	57
1970	1,787	13,291	34	692	1,753	12,599	50	2	48
1971	2,593	15,884	46	738	2,547	15,146	47	1	46
1972	3,550	19,434	420	1,158	3,130	18,276	66	6	60
1973	4,181	23,615	604	1,762	3,578	21,854	74	11	63
1974	5,300	28,915	1,758	3,520	3,542	25,395	88	22	66
1975	6,321	35,236	2,266	5,785	4,056	29,451	102	26	76
1976	7,445	42,681	2,421	8,206	5,024	34,475	102	28	74
TQ	1,462	44,143	397	8,604	1,064	35,539	20	5	15
1977	9,704	53,847	4,672	13,276	5,032	40,571	112	41	71
				Research Grants					
1964	$I,160	$1,160	$11	$11	$I,150	$1,150	54	1	53
1965	1,634	2,794	18	29	1,616	2,766	64	1	63
1966	1,962	4,757	76	105	1,886	4,651	62	2	60
1967	2,130	6,886	67	172	2,063	6,714	71	2	69
1968	2,060	8,946	81	253	1,979	8,693	64	1	63
1969	2,121	11,067	87	340	2,034	10,727	58	2	56
1970	1,736	12,804	34	374	1,703	12,430	49	2	47
1971	1,804	14,607	46	420	1,757	14,187	43	1	42
1972	2,594	17,201	96	516	2,498	16,685	60	3	57
1973	2,888	20,089	263	779	2,626	19,311	64	5	59
1974	4,264	24,353	894	1,673	3,369	22,680	78	14	64
1975	4,920	29,273	865	2,538	4,056	26,735	93	17	76
1976	6,046	35,319	1,022	3,560	5,024	31,759	91	17	74
TQ	1,077	36,397	13	3,573	1,064	32,824	17	2	15
1977	7,124	43,521	2,093	5,666	5,032	37,856	97	26	71

Annual and Cumulative Awards, NICHD Grants and Contracts on SIDS
FY 1964 - FY 1977 (continued)

Research Contracts

Fiscal Year	Funds (thousands)						Number of Projects		
	Total		Primary		Subsidiary		Total	Primary	Subsidiary
	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative			
1964	$12	$12	$12	$12	-	-	1	1	-
1965	-	12	-	12	-	-	-	-	-
1966	165	177	165	177	-	-	1	1	-
1967	185	362	141	318	$44	$44	2	1	1
1968	-	362	-	318	-	44	-	-	-
1969	75	437	-	318	75	119	1	-	1
1970	51	488	-	318	51	170	1	-	1
1971	789	1,277	-	318	789	959	4	-	4
1972	956	2,233	324	642	632	1,591	6	3	3
1973	1,293	3,526	341	983	952	2,543	10	6	4
1974	1,036	4,562	864	1,847	173	2,716	10	8	2
1975	1,401	5,963	1,401	3,248	-	2,716	9	9	-
1976	1,399	7,362	1,399	4,647	-	2,716	11	11	-
TQ	384	7,746	384	5,031	-	2,716	3	3	-
1977	2,580	10,326	2,580	7,611	-	2,716	15	15	-

Notes: (1) Where only a part of the research under a program project is relevant to SIDS, funds representing the relevant portion have been estimated. For other types of awards, however, the total funds are used even when only a portion of the research is relevant.

(2) Beginning with 1975, Research Career Program awards are included with research grants.

NICHD-OPE-SAS
January 20, 1978

Mary Aronson of Senator Cranston's staff requested the following information:

	Council Year	
	1977	1978
Direct SIDS Research		
- No. of grants approved but unfunded	5	7
- $ needed to fund these grants	$247,000	$349,000
Research With Subsidiary Relevance for SIDS		
- No. of grants approved but unfunded	23	21
- $ needed to fund these grants	$1,076,000	$1,476,000
High-Risk Pregnancy / High Risk Infancy Research		
- No. of grants approved but unfunded	26	39
- $ needed to fund these grants	$1,179,000	$1,822,000

NICHD Research Grant Applications Related Specifically to SIDS Reviewed by National Advisory Child Health and Human Development Council Council Years 1964-1978

Council Year	Total Applications Reviewed	Disapproved	Deferred	Approved		
				Total	Funded	Unfunded
Total	136	69	1	66	49	17
1964	1	1	-	-	-	-
1965	2	1	-	1	1	-
1966	1	-	-	1	1	-
1967	-	-	-	-	-	-
1968	2	1	-	1	1	-
1969	2	1	-	1	1	-
1970	3	2	-	1	1	-
1971	5	4	-	1	1	-
1972	1	-	-	1	1	-
1973	15	11	-	4	4	-
1974	20	10	-	10	10	-
1975	19	10	-	9	9	-
1976	22	11	-	11	4	7
1977	29	13	-	16	11	5
1978 a/	14	4	1	9	4	5

a/ September 1977 and January 1978 Council meetings

NICHD-OPE-SAS
February 28, 1978

Funding Distribution, by Number and Percent, of NICHD Approved SIDS Primary Projects, FY 1977

Primary

Support	Funds (thousands)			
	Approved	Percent	Unfunded	Percent
Total	$4,668	100.0	$1,429	100.0
Grants	1,703	36.5	432	30.2
Contracts	2,966	63.5	997	69.8

Primary

Support	Number of Applications			
	Approved	Percent	Unfunded	Percent
Total	32	100.0	12	100.0
Grants	15	46.9	6	50.0
Contracts	17	53.1	6	50.0

NICHD-OPE-SAS
March 8, 1978

Senator **Cranston**. Have you developed contract specifications for promising areas of research that you have not been able to fund?

Dr. **Kretchmer**. I would have to refer that to Dr Hasselmeyer.

Dr. **Hasselmeyer**. Assistant Secretary Richmond mentioned our SIDS cooperative study funded by contracts. This is a study involving six cooperating centers. The reviewers had recommended approval of an additional three. At the present, these three are not funded but they do have an approval record.

I would indicate that, in reference to approved but not funded research grants which Dr. Kretchmer mentioned, it is the policy of the NICHD SIDS program to work with the investigators when they are approved but are not funded so as to improve the scientific quality of their proposal and to have the proposal resubmitted and reevaluated. This has proved to be very successful in the past and has kept the quality of the research program in SIDS top notch.

Rather than funding every grant that receives a recommendation of approval, we would prefer to strengthen the scientific base of our research endeavors.

Senator **Cranston**. How much additional money would be needed to fund all those contracts that are unfunded? If you don't have that, you can give it to us for the record.

Dr. **Hasselmeyer**. For the SIDS risk factor study, it is about $489,000 to fund those additional three centers for the SIDS cooperative study.

Senator **Cranston**. What percentage of approved but unfunded grants and contracts, through fiscal 1979, will be able to be funded by the President's request of $10.4 million for SIDS research?

Dr. **Kretchmer**. We estimate for fiscal 1979, Mr. Chairman, approximately 40 percent overall will be paid.

Senator **Cranston**. Is that a percentage of the unfunded grants that will get funded?

Dr. **Kretchmer**. That's the percentage of approved grants that we estimate will be funded.

Senator **Cranston**. If you can't give us this now, for the record, what percentage of the unfunded grants will you be able to cover with this amount?

Dr. **Kretchmer**. We'll have to make a calculation and we will supply that.

NICHD estimates that it will be able to fund at approximately its overall funding rate of about 40 percent.

Senator **Cranston**. I would also like to ask how that $10.4 million requested for SIDS research in fiscal 1979 breaks down between primary and secondary SIDS research activities.

Dr. **Kretchmer**. It breaks down similarly to 1977.

Senator **Cranston**. Into what new areas do we need to extend SIDS research activities?

Dr. **Kretchmer**. I think Dr. Hasselmeyer can answer this, but just let me say that overall the findings are that these babies are really not healthy babies. We have been extending our studies into high-risk pregnancy and high-risk infancy. One of the new initiatives we are performing in this area is a study of low oxygen during fetal life.

Do you want to add to that?

Dr. **Hasselmeyer.** I feel we should continue looking at the neurophysiological and cardiorespiratory aspects. I think we could strengthen our scientific base concerning the behavioral facets of the problem.

Senator **Cranston.** What recent advances have been made in identifying a SIDS-specific physiological or anatomical defect or lesion?

Dr. **Kretchmer.** I think I would have to say, Mr. Chairman, so far we have not discovered any SIDS-specific physiological defect.

Senator **Cranston.** Do you seem to be getting any closer? Is there any sign of advances, or are you still totally baffled?

Dr. **Kretchmer.** There is a distinct sign of advances, but I don't think that means we necessarily expect there will be one defect. There may be a defect in the brain that is particular.

Dr. **Richmond.** Mr. Chairman, I think I would like to comment that one of the aspects of the cooperative case-control study which intrigues me, is that it provides a better opportunity to look at the interaction of the various factors that may predispose and, indeed, trigger this.

I think as we look more and more at the interactions we may, perhaps, elucidate the combination of factors. Consider all of the issues that the various investigators have been working on—they may not act singly, but some of them may act in concert. I think as we look at multiple factors we will probably come closer to the answers.

Senator **Cranston.** Have advances been made in recent years in identifying high-risk infants?

Dr. **Richmond.** Yes, we think many such advances have been made, certainly in terms of neurophysiological—regulatory activities, cardiac rate, respiratory rate, sleep states—particularly sleep apnea—the relationships to environmental change, temperature and otherwise.

I might also indicate that we are interested in looking much more carefully at the influence of smoking on the part of the mother during pregnancy as another predisposing factor. Thus, there are a number of these factors that we think are becoming important and are relatively new.

Senator **Cranston.** Once such an identification has been made, what can be done for such a baby?

Dr. **Richmond.** What we are inclined to do as we identify predisposing factors, is to try to observe these babies carefully and get them through the age period of greatest vulnerability.

As we have indicated, the monitoring of infants over time, particularly in the home, would enable us to respond to either a cessation of respiration or heart rate more promptly with the hope of resuscitation.

Senator **Cranston.** On page 6 of your testimony you discuss two projects which are being carried out by NICHD—the cooperative case-control study and the development of an inexpensive cardiopulmonary monitor.

In addition, you state that the results of these two studies will provide you with the data and equipment you need to make a SIDS prevention program feasible.

When will each of those projects be completed?

Dr. RICHMOND. I think Dr. Hasselmeyer——

Senator CRANSTON. And also, could you indicate what will be the cost for each?

Dr. HASSELMEYER. In September of 1977 we contracted with six cooperative centers, several of which are located where we have information and counseling centers funded under Public Law 93-270. At the same time we contracted for the development of an inexpensive, reliable, compact, rugged, and reasonably quiet home-use instrument with the sensing, processing, and recording capabilities for monitoring specific physiological functions found to be related to SIDS.

I want to stress, as you mentioned in the opening statement, with all the information we have now, it is still not possible to identify accurately the potential victim beforehand in time to save the infant.

Our SIDS cooperative case-control study is directed at this effort, with the long-range effort being to identify which babies will be at risk beforehand and to take preventive measures. We are now working on the development of the monitor from which we will get data concerned with sleep, mobility, crying, cardiorespiratory rates, and variability.

Our SIDS cooperative case-control study is divided into three broad phases. Phase one, which we are ready to begin operation pending some clearance papers, will identify risk factors associated with SIDS. It will involve a minimum of 1,800 babies, 600 of whom will have died of SIDS and the other 1,200 being living babies. The data will be collected by postmortum examination, questionnaire, interviews, and a review of medical records.

The autopsy protocol being used is that which was developed by the pathologists working in collaboration with SIDS centers funded under Public Law 93-270. Our effort here is, using a logarithm model, to develop a prediction scheme so that we will be able to identify newborns who will be at risk for SIDS.

Our next phase of this study will be timed with the completion of the home monitor, where the infant will be monitored at home to accurately determine the physiological and environmental factors which can be used to improve our prediction of babies at risk. We want to be able to identify for all babies a level of risk through monitoring at home when babies are having abnormal development in their physiology, cardiorespiratory, and sleep patterns.

We anticipate that 12 months will be required with these six cooperating studies to collect data on the 1,800 babies and another 6 months for analysis. It depends on when we start. We should be ready in 1979 or beginning 1980 to initiate the second phase of this study involving living babies. What we will try to do is perfect our method and also capitalize on looking at specific physiological changes occurring.

The first phase of this study is estimated at this time to cost approximately $900,000. I cannot say what the other phases of the study will cost at this time.

Senator CRANSTON. Who is carrying out each of these projects?

Dr. **Hasselmeyer.** The data-coordinating center is at the University of Washington. The data collection centers are located at the University of Washington in Seattle, and in New York City it is the Medical and Health Research Association of New York.

There is a data collection center in Chicago, at Loyola University, which is also connected with one of the SIDS centers. We have the St. Louis Maternal and Child Health Council, which is also connected with a Public Law 93–270 funded SIDS center. The other two data collection centers are located at the University of California at Davis, and the New York State Health Department in Albany, N.Y.

[The material referred to follows:]

NICHD Obligations for SIDS Risk Factor Study Contracts - FY 1977

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
1 N01 72839-00	Peterson, Donald R. Washington, U. of Seattle, Wash.	SIDS Risk Factor Cooperative Study	9/30/77	199,609
1 N01 72840-00	Kraus, Jess F. California, U. of Davis, Calif.	SIDS Risk Factor Cooperative Study	9/30/77	172,000
1 N01 72841-00	Janerich, Dwight T. Health Research Inc. Albany, N.Y.	SIDS Risk Factor Cooperative Study	9/30/77	94,158
1 N01 72842-00	Pakter, Jean Med. & Hlth. Res. Assn. of New York City, Inc. New York, N.Y.	SIDS Risk Factor Cooperative Study	9/30/77	184,500
1 N01 72843-00	Goldberg, Julius Loyola U. Maywood, Ill.	SIDS Risk Factor Cooperative Study	9/30/77	182,514
1 N01 72844-00	Hillman, Laura S. St. Louis Maternal & Child Health Council St. Louis, Mo.	SIDS Risk Factor Cooperative Study	9/30/77	$70,467

Senator **Cranston**. In light of the importance of these projects, is there any way we can expedite their completion?

Dr. **Hasselmeyer**. Well, the sooner we get started, the quicker we can finish. We're just waiting for some clearance of papers.

Senator **Cranston**. You talked about delays of 18 months. Is there any way we could help expedite that?

Dr. **Hasselmeyer**. Well, if we were to add more babies to the sample we would probably be able to finish about 3 months earlier. But we want to keep the quality of the work high, and perhaps if you have too many centers participating, the quality may go down. But we do have three centers that have been approved and are able to function in the cooperative study.

Senator **Cranston**. There are so many infants dying annually, that it is important, obviously, with the proper controls, to move ahead as rapidly as possible.

Dr. **Hasselmeyer**. This was a study we wanted to do 5 years ago but didn't have the basic knowledge. We do now——

Senator **Cranston**. How many more centers would you have to add?

Dr. **Hasselmeyer**. If we added three more centers, it would increase our data base by 300 babies. It would probably shorten our first phase of the study by 3 months, but no more than 3 months.

It does increase the number of people involved in the study, and at the same time it requires a careful monitoring, with all investigators monitoring each other.

Senator **Cranston**. If you had six centers, would it reduce it by 6 months?

Dr. **Hasselmeyer**. Well, sometimes the more you add, the quality of the work goes down.

Senator **Cranston**. We don't want that to happen.

What would it cost to add three centers?

Dr. **Hasselmeyer**. If we add three centers, it would come to approximately $489,000, which is the cost for the three that were already funded.

Senator **Cranston**. How long after completion of the two projects will it take to develop and implement the prevention program?

Dr. **Hasselmeyer**. We want to begin the prevention program by the middle of 1979. And if that runs 1 year, by the middle of 1980 we would hope to have our predictive scheme all worked out, having gone through the second phase with the live babies and making our scheme even more——

Senator **Cranston**. You say the prevention program will begin about 18 months from now?

Dr. **Hasselmeyer**. Yes, around the end of 1979.

Senator **Cranston**. Would you give us, for the record, a list of States and territories where there are and are not information and counseling projects located?

[The material referred to follows:]

List of States With and Without SIDS Information and Counseling Service Projects as of January 1, 1978

States, Territories, and Districts	Estimated SIDS Cases	States w/ Federal Support: Projects w/ Statewide Coverage	States w/ Federal Support: Less Than Statewide Projects	States With No Federal Support	Application Kits Requested 3)	Additional Comments
(in descending order of priority)						
California	662	1				
New York	471		3		x	Needs 1-2 more projects about 1/3 population not served yet.
Texas	453		2		x	No coverage in West and needs 1-2 more projects
Illinois	335	2				
Ohio	307	1				
Pennsylvania	298		1			Project and State Health Department working to cover State
Michigan	260		1			Project and State Health Department working to cover State
Florida	209	1				
New Jersey	175	1				
Indiana	160			x	x	
North Carolina	160	1				
Georgia	160			x	x	
Missouri	141		1			Project and State Health Dept. working to cover State
Puerto Rico	2) 139			x		

List of States With and Without SIDS Information and Counseling Service Projects as of January 1, 1978

States, Territories, and Districts	Estimated SIDS Cases	States w/ Federal Support		States With No Federal Support	3)	Additional Comments
		Projects w/ Statewide Coverage	Less Than Statewide Projects		Application Kits Requested	
(in descending order of priority)						
Louisiana	138			x		State Health Department and voluntary groups provide some services
Massachusetts	137		1		x	Preparing to expand statewide
Virginia	134			x	x	
Wisconsin	130			x	x	
Tennessee	130			x	x	
Alabama	115		1			May not be ready to expand statewide this year
Kentucky	113	1				
Minnesota	113	1				
Washington	99	2				
South Carolina	93			x		
Maryland	91		1			Project and State Health Department working to cover State
Mississippi	84			x		
Oklahoma	84			x	x	
Iowa	82	1				

List of States With and Without SIDS Information and Counseling Service Projects as of January 1, 1978

States, Territories, and Districts (in descending order of priority)	Estimated SIDS Cases	States w/ Federal Support			3)	
		Projects w/ Statewide Coverage	Less Than Statewide Projects	States With No Federal Support	Application Kits Requested	Additional Comments
Colorado	82	1				
Arizona	80			x	x	
Oregon	71			x		State medical examiner, voluntary groups and State Health Department provide some services
Utah	71	1				
Connecticut	69	1				
Kansas	67			x	x	
Arkansas	66	1				
West Virginia	56			x		
Nebraska	48			x	x	State Health Department and voluntary groups provide some services
New Mexico	44	1				
District of Columbia	37			x	x	
Idaho	33			x		
Hawaii	32			x	x	
Maine	29			x		
Montana	24			x		

List of States With and Without SIDS Information and Counseling Service Projects as of January 1, 1978

States, Territories, and Districts	Estimated SIDS Cases	States w/ Federal Support: Projects w/ Statewide Coverage	States w/ Federal Support: Less Than Statewide Projects	States With No Federal Support	Application Kits Requested 1)	Additional Comments
(in descending order of priority)						
South Dakota	22	1				
New Hampshire	22	1				
Rhode Island	22	1				
North Dakota	22			x	x	State law provides for SIDS program in State Health Dept
Nevada	19			x	x	
Delaware	16			x		Working with Maryland projec
Alaska	16			x		State Health Department and voluntary groups have servic in Anchorage where 50% of population reside
Wyoming	13			x		Some services provided by State Health Dept., voluntar groups and Colorado project
Vermont	13	1				
Trust Territories	2) 300			x		Special efforts are necessar for these areas. May be bes to make SIDS program an integral part of the MCH program from the start.
Guam	2) 6			x		
Virgin Islands	2) 4			x		
American Samoa	2) 4			x		
North Marianas	2) ?			x		

List of States With and Without SIDS Information and Counseling Service Projects as of January 1, 1978

States, Territories, and Districts	Estimated SIDS Cases	States w/ Federal Support		States With No Federal Support	Application Kits Requested 3)	Additional Comments
		Projects w/ Statewide Coverage	Less Than Statewide Projects			
TOTALS	6761	19 States with 21 proj.	8 States with 11	30	16	
		27 States with 32 projects				

1) Estimates based on average of 20 SIDS Deaths per 1,000 Live Births using 1976 data from Vital Statistics.

2) Data not reliable.

3) This reflects the application kits requested from States currently without Federal support or from areas not covered by federally funded SIDS Information and Counseling projects. Applications submitted will be reviewed for grant awards by June 30, 1978.

Dr. **Marshall**. Yes, Senator, we can give you that for the record.

Senator **Cranston**. What percentage of known SIDS deaths are covered by the existing 32 projects?

Dr. **Richmond**. Dr. Marshall?

Dr. **Marshall**. About 54 percent or about 4,000 families of a total of 7,500 of who experience SIDS deaths receive counseling, Senator.

Senator **Cranston**. Am I correct that there are 29 States and territories that have no information and counseling projects?

Dr. **Marshall**. Yes, sir—Well, it's actually 30, I guess, if you include the trust territories.

Senator **Cranston**. What is happening in those States and territories to meet their needs?

Dr. **Marshall**. There is fragmented coverage because there may be local groups or there may be some activity that is sponsored by the State. Generally, however, it is an insignificant level of activity.

Senator **Cranston**. Are there many States where there are existing voluntary, parent, self-help groups?

Dr. **Marshall**. Yes, sir. I don't know the number of those. Perhaps Mrs. Norris does.

Senator **Cranston**. Could you give us a list for the record?

Dr. **Marshall**. Yes, sir.

[The material referred to follows:]

National Sudden Infant Death Syndrome Foundation
310 S. Michigan Ave. • Chicago, Ill. 60604 • (312) 663-0650

July 28, 1978

MEMO

TO: Geraldine Norris
Office of Maternal and Child Health, DHEW

FROM: Carolyn Szybist
Executive Director, NSIDSF

At the request of your office, enclosed you will find a preliminary draft of our current listing of Chapter Presidents. We are currently in the process of printing a new directory but it was indicated that there was some immediate need for an up to date listing. I hope that this will suffice for the interim.

Any distribution of this list should indicate that it is a draft.

Thanks!!

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FOR INFANT SURVIVAL, INC.

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REGIONAL REPRESENTATIVES

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Coordinating organization for Affiliated Guilds for Infant Survival which are dedicated to solving the mystery of Sudden Infant Death through personal service, public information, and medical research.

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Sudden Infant Death is a mysterious and tragic phenomenon which kills normal, apparently healthy, active infants in their first few months of life--without any warning and for no apparent reason. Though evidence of it goes back to Biblical times (referred to as "overlaying"), there is still no known cause, no prevention, no treatment, no cure.

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> The Guilds for Infant Survival are people helping people... man's humanity to man! Each Guild is a miniature democracy in action - many people of different backgrounds and characteristics with varied talents and abilities - all drawn together for common purpose and accomplishment, each serving in his own way to help save new lives.

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The Council for Infant Survival welcomes your own personal involvement. Contact the Guild group closest to you, or the Council office. Here is rewarding opportunity for you to join and serve our life-giving cause... to help speed the day when no more beloved babies will die from Sudden Infant Death.

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Senator **Cranston**. Of those 30 States, what you were saying was there was either no activity or inadequate activity?

Dr. **Marshall**. That's correct, sir.

Senator **Cranston**. How many additional counseling and information projects would be needed to cover adequately all the States and territories?

Dr. **Marshall**. We would need about 34 more. Some States in which we presently provide support may require more than one project to provide statewide coverage, so the number could be slightly higher than 30.

Senator **Cranston**. A large State may need more?

Dr. **Marshall**. Yes, if we would expect it to have statewide coverage.

Senator **Cranston**. Could you let us know for the record how many more projects would be needed to cover all the States and territories?

Dr. **Marshall**. Yes. In fact, we have a list of those prioritized by the number of estimated SIDS deaths.

Senator **Cranston**. Do you know how much it would cost to develop these additional projects?

Dr. **Marshall**. About $5.5 million. That is not in addition to the current appropriation—rather, it would be the total appropriation of about $5.5 million.

Senator **Cranston**. Would you give us a list and indicate those priorities?

Dr. **Marshall**. Yes, sir. They will be in rank order.

[The material referred to follows:]

It is estimated that 30 projects will be required to provide statewide coverage of SIDS Information and Counseling services in those States that presently have no federally funded SIDS projects. Of the 8 States which currently have SIDS projects providing less than statewide coverage it is estimated that 4 will require an additional project to provide statewide coverage while projects in the remaining 4 States can arrange for statewide coverage without additional projects being initiated. Such expansion does require additional financial support. Table I is an estimate of the additional costs. Table II indicates those States that require new projects and Table III is a list of those States in which services must be expanded for statewide coverage.

TABLE I

Cost Estimates for Providing Statewide Coverage in Areas not Currently Receiving SIDS Information and Counseling Services As of January 1, 1978

States and Territories	Anticipated Number of Projects	Cost Range
30 States and territories that need services initiated	30	$1,555,000 - $2,000,000
8 States that need current service base expanded for statewide coverage (Expand 4 projects statewide. Four States may require an additional project to provide statewide coverage)	12	475,000 - 550,000
TOTAL		$2,030,000 - $2,550,000

TABLE II

List of States Without Federal Support for SIDS Information and Counseling Services As of January 1, 1978

30 States and Territories that Need SIDS Information and Counseling Services Developed	Estimated 1) SIDS	Number of Projects Referred
Priority A		
1. Indiana	160	1
2. Georgia	160	1
3. Puerto Rico	139	1
4. Louisiana	138	1
5. Virginia	134	1
6. Wisconsin	130	1
7. Tennessee	130	1
Priority B		
8. South Carolina	93	1
9. Mississippi	84	1
10. Oklahoma	84	1
11. Arizona	80	1
12. Oregon	71	1
13. Kansas	67	1
14. West Virginia	56	1
15. Nebraska	48	1
16. District of Columbia	37	1
17. Idaho	33	1
18. Hawaii	32	1
19. Maine	29	1
20. Montana	24	1
21. North Dakota	22	1
22. Nevada	19	1
23. Delaware	16	1
24. Alaska	16	1
25. Wyoming	13	1
Priority C 3)		
26. Trust Territories	300 2)	1
27. Guam	6 2)	1
28. Virgin Islands	4 2)	1
29. American Samoa	4 2)	1
30. North Marianas	? 2)	1

Page 2 - Table II

1) Based on 2 SIDS Deaths in 1,000 Live Births

2) Data Not Reliable

3) May be best to make SIDS program an integral part of the Maternal and Child Health program from the start.

TABLE III

List of States With SIDS Information and Counseling Projects That Need Expansion for State Coverage As of January 1, 1978

States	Estimated SIDS	Estimated % of Families that currently can be served	Comments
1. New York	471	40	additional project
2. Texas	453	40	additional project
3. Pennsylvania	298	60	
4. Michigan	260	40	
5. Missouri	141	38	
6. Massachusetts	137	61	additional project
7. Alabama	115	20	additional project
8. Maryland	91	80	

Senator **Cranston**. It is our understanding that the President's budget request for fiscal year 1979 is $3 million, yet your statements seem to indicate that this amount is actually only $2,802,000.

Dr. **Marshall**. That's the amount of money that we would expect to make available for project support, deducting out the amount of money that you need for some contracts and for paying the salaries of the Federal personnel working on this program.

Senator **Cranston**. Has program support always been taken out?

Dr. **Marshall**. No, sir. In the first few years, some of of the program support was absorbed from the general administrative costs in the Bureau of Community Health Services.

Senator **Cranston**. You mentioned contracts. Does the $2,082,000 represent only grants?

Dr. **Marshall**. Yes, sir.

Senator **Cranson**. Could you give us a break out for the record of the other $200,000?

Dr. **Marshall**. Yes, sir.

Now, that would be a projected break out, Senator, because we're not into that period yet. However, we have some estimates of that.

[The following was subsequently supplied for the record.]

Sudden infant death syndrome program support estimate

Fiscal year 1979:	
Personal Services and Benefits	$145, 000
Travel	15, 000
Other program costs including evaluation, other service contracts and purchase orders	38, 000
	198, 000

Senator **Cranston**. If you had the additional $5 million, how fast could you cover the balance of the need?

Dr. **Marshall**. I will ask Mrs. Norris to speak to that. She is more familiar with the various States than I am.

Mrs. **Norris**. I think the majority of the States that do not have projects, that probably 23 or 24 out of the 30, could be developed in a year to 18 months.

There are four or five territories that are a little more difficult and it would probably take a little bit more time to develop programs for them.

Senator **Cranston**. Those 23 or 24 States are interested in getting into it?

Mrs. **Norris**. I think the majority of them have expressed an interest. We have received grant application this year for the larger majority of those States, and certainly from States that have large numbers of estimated SIDS deaths.

Senator **Cranston**. Would you give us a detailed breakdown on those applications as you receive them?

Mrs. **Norris**. Yes, sir, for the funded cycle. We can on April 1.

Senator **Cranston**. Could you give us some estimate of the quality, also, so we can judge whether they——

Dr. **Marshall**. You're asking us which ones we might have funded if we had the money, versus——

Senator **Cranston**. Yes, that's what we're interested in.

Dr. **Marshall**. That will not be possible, probably, for the record, because we will not know that until some time around the middle of April, because we are just now into the review cycle. We would not be able to provide that estimate——

Senator **Cranston**. We'll keep the record open and you can give it to us for last year.

Mrs. **Norris**. For last year?

Senator **Cranston**. Yes. Can you do that?

Mrs. **Norris**. Oh, yes.

Senator **Cranston**. And for the record, this year.

Dr. **Marshall**. All right.

[The following information was subsequently supplied for the record by Dr. Marshall:]

A report of the applications received and reviewed during April through June of 1978 will be submitted for the record. Table I - list of projects recommended for approval during the spring 1977 review cycle in which applicants were competing for fiscal year 1977 funds. All projects were funded in June 1977 except for Kentucky, South Dakota and the Northern Texas proposals. Funds were not available for these projects until January 1978 and then at that time these 3 proposals were funded.

In addition three (3) applications were reviewed and were not considered to be meritorious for funding.

These 3 applications were:

Community Council fo Greater Dallas, Dallas, Texas

Texas Department of Health Resources, Austin, Texas

Nebraska Department of Health, Lincoln, Nebraska

Summary of Grant Award Activities
Sudden Infant Death Syndrome
Information and Counseling Projects
Fiscal Year 1977 and Fiscal Year 1978

	Review Cycles	
	Fiscal Year 1977 March - June	Fiscal Year 1978 March - June
Grant applications received and reviewed	35	36
Grant applications approved and funded	28[1]	28
Grant applications previously approved but funding was delayed	1[2]	3[3]
Grant applications approved but not funded	3	2[4]
Applications not recommended for funding:		
New	2	5
Renewal	1	1

1) Funding commenced July 1, 1977.

2) Funding commenced October 1, 1977.

3) Funding commenced January 1, 1978 (reviewed and approved June 1977).

4. Grant awards pending availability of funds as of 7/25/78.

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Alabama	(MCH-000024-03) SIDS Information and Counseling Project 248 Cox Street Mobile, Alabama 36601 Telephone: 205 690-8101 Project Director: Alfred R. Stumpe, M.D. Director of Public Health Nurses: Joy Rolison, R.N 205 690-8130 Project Administrator: John R. Williamson 205 690-8134 Grantee: Mobile City Health Department Area Served: Counties, Choctau, Clarke, Coneceih, Baldwin, Mobile, Monroe, Washington, Escombia	$ 53,442
Arkansas	(MCH-000001-03) Arkansas SIDS Project Arkansas Department of Health 4815 West Markham Little Rock, Arkansas 72201 Telephone: 501 661-2242 Project Director: J.B. Norton, M.D. 501 661-5692 Project Coordinator: Glenda Donaldson, R.N. Project Administrator: Mr. George Weber 501 661-2256 Grantee: Arkansas Department of Health Area Served: State of Arkansas	$ 47,840

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
California	(MCH-000018-03) SIDS Information and Counseling Project California State Department of Health 2151 Berkeley Way Berkeley, California 94704 Telephone: 415 843-7900 x367 Project Director: Warren Hawes, MD. Nursing Consultant: Carol Cook, R.N. Grantee: California Department of Health Area Served: State of California	$144,661
Colorado	(MCH-000042-02) SIDS Information and Counseling Center The Children's Hospital 1056 E. 19th Avenue Denver, Colorado 80218 Telephone: 303 861-6111 x 2204 Project Director: Susan Williams, R.N. Program Coordinator: Susan Perron, R.N.M.S. 303 861-8888 x2381 4210 E. 11th Avenue Denver, Colorado 80220 Grantee: Colorado Department of Health Area Served: State of Colorado	$ 54,103

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Connecticut	(MCH-000032-02) Management Program for SIDS State Department of Health 79 Elm Street Hartford, Connecticut 06115 Telephone: 203 566-3286 Project Director: Carol Christoffers, R.N. Office of the Medical Examiner P.O. Box 427 Farmington, Connecticut 06032 Telephone: 203 677-7784 Grantee: Connecticut Department of Health Area Served: State of Connecticut	$ 59,501
Florida	(MCH-000023-03) Florida SIDS Information and Counseling Project State Department of Health and Rehabilitation Services 1323 Winewood Boulevard Tallahassee, Florida 32301 Telephone: 904 488-2834 Project Director: Emily Gates, M.D. Project Coordinator: J. Robert Griffin 904 487-1503 Grantee: State Department of Health Area Served: State of Florida	$123,028

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Illinois	(MCH-000026-03) SIDS Regional Center Loyola University Medical Center Building 54, 2nd Floor 2160 South 1st Avenue Maywood, Illinois 60153 Telephone: 312 531-3420 Project Director: Louis E. Gibson, M.D. Project Coordinator: Milde Dargis 312 531-3374 Grantee: Loyola University Area Served: Counties - Cook, Lake Illinois, McHenry, Kane, Will, Boone, Wennebago, Dupage, Dekalb, Lake City	$131,459
	(MCH-000028-03) SIDS Information and Counseling Project Department of Public Health 535 W. Jefferson Street Springfield, Illinois 62761 Telephone: 217 782-2736 Project Director: Joseph Kihn, MSW Health Educator: Nancy Reining 217 782-2060 Grantee: Department of Public Health Area Served: State of Illinois excluding counties served by Loyola	$ 44,065

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Iowa	(MCH-000035-02) Iowa SIDS Program Lucas State Office Building Department of Health Des Moines, Iowa 50310 Telephone: 515 281-4904 Project Director: Roger Chapman Public Health Educator: Monica Eischen Grantee: Iowa State Department of Health Area Served: State of Iowa	$ 60,966
Kentucky	(MCH-000048-01) Kentucky SIDS Information and Counseling Project Department of Health 275 E. Main Street Department of Human Resources Frankfort, Kentucky 40601 Telephone: 502 564-4830 Patricia Nicol, M.D. State Coordinator: Rosemary Catlett, R.N. 502 564-3828 Nurse Coordinator: Karen B. Eades, R.N. Grantee: Kentucky Department of Health Area Served: State of Kentucky	$ 58,700

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Maryland	(MCH-000047-03) Central Maryland SIDS Center University of Maryland 645 West Redwood Street Baltimore, Maryland 21201 Telephone: 301 528-3523 Project Director: Stanford B. Friedman, M.D. Project Administrator: Stanley Weinstein, MSW 301 528-5062 Dept. of Psychiatry Grantee: University of Maryland, Dept. of Child and Adolescent Psychiatry School of Medicine Area Served: Counties - Baltimore, Ann Arundel, Baltimore, Calvert, Carroll, Cecil, Charles, Frederick, Harford, Howard, Montgomery, Prince Georges, St. Marys and Baltimore City	$ 84,927
Massachusetts	(MCH-000003-03) Regional Center for SIDS Department of Pediatrics Boston City Hospital 818 Harrison Avenue Boston, Massachusetts 02118 Telephone: 617 424-5875 Project Director: Robert Reece, M.D. Nursing Coordinator: Jill McAnulty, R.N. 617 424-5742 Grantee: Trustees of Health and Hospitals of the City of Boston Area Served: State of Massachusetts	$114,913

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Michigan	(MCH-000005-03) SIDS Information and Counseling Project P.O. Box 36685 Grosse Pointe, Michigan 48236 Telephone: 313 963-1528 Project Director: Werner Spitz, M.D. Project Coordinator: Zoe Smialek, R.N. 313 963-0595 Grantee: Michigan Medical Legal Research and Educational Association, Inc. Area Served: Wayne County with consultant services statewide	$ 64,704
Minnesota	(MCH-000044-02) The Minnesota SIDS Program Children's Health Center 2525 Chicago Avenue South Minneapolis, Minnesota 55404 Telephone: 612 874-6285 Project Director: Ralph Franciosi, M.D. Program Coordinator: Kathleen Fernback Grantee: Children's Health Center and Hospital Area Served: State of Minnesota	$ 69,740

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Missouri	(MCH-000008-03) St. Louis SIDS Project 725 University Club Building 607 North Grand Boulevard St. Louis, Missouri 63103 Telephone: 314 454-2141 **Project Directors:** Laura Hillman, M.D. George Gantner, M.D. 314 727-6300 x319 **Service Coordinator:** Helen Fuller 314 454-4100 **Grantee:** St. Louis Regional Maternal and Child Health Council **Area Served:** St. Louis City and County, Franklin County: Jefferson and St. Charles	$ 46,933
New Hampshire	(MCH-000025-03) New Hampshire SIDS Management Program State Health Department 61 South Spring Street Concord, New Hampshire 03301 Telephone: 603 271-2492 **Project Director:** Samuel W. Dooley, M.D. Project Coordinator **Grantee:** State Health Department, Division of Health, Bureau of Maternal and Child Health **Area Served:** State of New Hampshire	$ 23,525

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
New Jersey	(MCH-000031-02) New Jersey SIDS Program New Jersey Department of Health P.O. Box 1540 Trenton, New Jersey 08625 Telephone: 609 292-5617 Project Director: Margaret Gregory, M.D. Project Coordinator: Patricia Dorsa, MSW Grantee: New Jersey Department of Health Area Served: State of New Jersey	$ 59,221
New Mexico	(MCH-000023-03) New Mexico SIDS Information and Counseling Project University of New Mexico, School of Medicine Office of the Medical Examiner Albuquerque, New Mexico 87131 Telephone: 505 277-2861 Project Director: James T. Weston, M.D. Program Coordinator: Beverly White, RN, MS Grantee: University of New Mexico, School of Medicine Area Served: State of New Mexico	$ 55,131

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
New York	(MCH-000039-02) New York City Information and Counseling Program for SIDS Office of Medical Examiner 520 First Avenue, Room 506 New York, New York 11016 Telephone: 212 686-8854 Project Director: Jean Pakter, M.D. and Dominic DiMao, MD Director of Maternity and Family Planning Department of Health 125 Worth Street New York, New York 10013 Telephone: 212 566-7076 Project Coordinator: Christine Blenninger 212 686-8854 Grantee: Medical and Research Association of New York, Inc. 40 Worth Street New York, New York 10013 Area Served: New York City	$101,543
	(MCH-000040-02) Genesee Regional SIDS Information and Counseling Center 224 Alexander Street Rochester, New York 14607 Telephone 716 263-6015 Project Directors: Margaret Colgan, M.D. Robert Hoekelman, M.D. 601 Elmwood Avenue University of Rochester Medical Center Rochester, New York 716 263-6015 Project Coordinator: Jackie Reingold 263-6017 Grantee: University of Rochester Medical Center Area Served: Counties - Monroe, Livingston, Stuehen, Chemung, Schuyler, Seneca, Yates, Ontario and Wayne	$ 48,994

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
New York Cont.	(MCH-000030-02) SIDS Information and Counseling Project Health Sciences Center, Rm. 119 Stoney Brook, New York 11794 Telephone: 516 444-2582 Project Director: Sanford Kravitz, M.D. Project Coordinator: Sandi Boshak Grantee: Research Foundation State University of New York Stoney Brook, New York 11794 Area Served: Suffolk and Nassau Counties	$ 90,380
North Carolina	(MCH-000004-03) SIDS Information and Counseling Project Department of Human Resources P.O. Box 2091 Raleigh, North Carolina 27602 Telephone: 919 966-2253 Project Director: Page Hudson, M.D. 919 733-7791 Division of Health Services P.O. Box 2488 Chapel Hill, North Carolina 27514 Project Coordinator: Henrietta Fullard, R.N. Grantee: Division of Health Services Chapel Hill, North Carolina Area Served: State of North Carolina	$101,253

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Ohio	(MCH-000034-02) A Program for SIDS in Ohio Division of Maternal and Child Health 246 N. High Street Columbus, Ohio 43216 Telephone: 614 466-2253 Project Director: John H. Ackerman, M.D. Project Coordinator: Marsha Herring 614 466-8804 Grantee: Ohio Department of Health Area Served: State of Ohio	$67,564
Pennsylvania	(MCH-000021-03) Delaware Valley SIDS Community Resource Center Children's Hospital of Philadelphia One Children's Center Philadelphia, Pennsylvania 19104 Telephone: 215 EV-7-6000 x522 Project Director: George Peckham, M.D. Project Coordinator: Leo Lefebrve 215 472-2229 Grantee: Children's Hospital of Philadelphia Area Served: Counties - Philadelphia, Chester, Montgomery, Delaware and Bucks	$137,174

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Rhode Island	(MCH-000002-03) SIDS Information and Counseling Project Rhode Island Department of Health 75 Davis Stree, Room 302 Providence, Rhode Island 02908 Telephone: 401 277-2309 Project Director: J.E. Cannon, M.D. 401 277-2231 Project Coordinator: Neil Young 401 277-2309 Grantee: Rhode Island Department of Health Area Served: State of Rhode Island	$ 39,530
South Dakota	(MCH-000050-01) South Dakota SIDS Project Sioux Valley Hospital 1100 S. Euclid Avenue Sioux Falls, South Dakota 57105 Telephone: 605 339-6578 Project Director: Stanley Graven, M.D. Project Coordinator: Jackie Elberts 605 336-3440 x 293 Grantee: South Dakota Health Department Joe Foss Building Capitol Avenue Pierre, South Dakota 57501 Area Served: State of South Dakota	$ 40,596

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Texas	(MCH-000049-01) SIDS Information and Counseling Project in the North Texas Area S.W.. Institute of Forensic Sciences 5230 Medical Center Drive Dallas, Texas 75235 Telephone: 214 638-1131 Project Director: Wallace J. Graham, M.D. Project Coordinator: Grantee: University of Texas Health Science Center Area Served: 93 counties North of Dallas	$ 66,692
	(MCH-000009-03) SIDS Information and Counseling Project Harris County Health Department 2370 Kice Boulevard P.O. Box 25249 Houston, Texas 77005 Telephone: 713 526-8448 Project Director: Francine Jensen, M.D. Project Coordinator: Ceretha S. Cartwright Grantee: Harris County Health Department Area Served: Counties - Harris, Houston, Galveston, Montgomery, Matagoia, Colorado, Austin, Wharlan, Walker, Liberty Broziora, Ft. Bend, Chambers, and Waller	$ 59,881

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Utah	(MCH-000013-03) SIDS Information and Counseling Project Department of Health 44 Medical Drive Salt Lake City, Utah 84113 Telephone: 801 533-6161 Project Director: Willis C. Stuliff, M.D. Project Nurse: Roberta Mahin 801 533-4232 Grantee: Utah Department of Health Area Served: State of Utah	$ 86,466
Vermont	(MCH-000027-03) Information and Counseling for SIDS Department of Health 115 Colchester Avenue Burlington, Vermont 05401 Telephone: 802 862-5701 x 311 Project Director: Roberta R. Coffin, M.D. x 365 Project Nurse: Cheryl Cyr Grantee: Vermont Department of Health Area Served: State of Vermont	$ 38,179

SUDDEN INFANT DEATH SYNDROME (SIDS)
Information and Counseling
Project Grants
January 1, 1978

State	Grantee	Budget
Washington	(MCH-000010-03) SIDS Northwest Regional Center 4800 Sand Point Way, N.E. Seattle, Washington 98105 Telephone: 206 634-3323 Project Director: Nora E. Davis, M.D. Project Coordinator: Irene Wiley Grantee: Children's Orthopedic Hospital and Medical Center Area Served: 22 Western Counties of Wash. State	$ 62,179
	(MCH-000006-03) Inland Empire Regional Center for SIDS Information and Counseling West 1115 Mallon Avenue Spokane, Washington 99201 Telephone: 509 456-3630 Project Director: F. Lee Mellish Merilyn Lloyd, PHN Project Coordinator: Phyllis Camp Grantee: Spokane County Health District Area Served: 17 counties of Eastern Washington, 10 counties of Northern Idaho, and 8 counties of Western Montana	$ 41,292

Senator **Cranston**. Has program support and program evaluation funding always been taken out of the specific program appropriation, or was this at one time taken out of the Bureau's budget?

Dr. **Marshall**. The Bureau of Community Health Services normally requests program support funds under a common budget line item for all of its separate programs. However, until 1978 Congress appropriated the SIDS program support funds under the same budget activity as is used for SIDS project grants and contracts rather than under the BCHS general activity. During this time, the Bureau supplemented SIDS with moneys provided under the general BCHS activity. In 1978 we requested that the $198,000 available for SIDS program support be handled in the same manner as the other Bureau programs for budgeting purposes. Therefore, this amount was transferred to the budget activity which provides program support for all other Bureau programs. This will cause no decrease in the funds available for SIDS grants and contracts because the $198,000 was used in the past, as it is now, for necessary program support costs for the SIDS program.

Senator **Cranston**. This program is catching up with the others, then?

Dr. **Marshall**. Yes, sir. We subsidized it slightly in the early years.

Senator **Cranston**. On page 11 of your testimony you say that you hope eventually to implement a nationwide counseling and information service system. Yet the President's budget request for SIDS shows no increase over the present funding level of $3 million.

How can you expand coverage when you have requested less than last year, when inflation is taken into account?

Dr. **Marshall**. I think the key, Senator, is that we hope to do it eventually.

Senator **Cranston**. But there would be no advance this year?

Dr. **Marshall**. We would add about five projects this year, but we would not add any next year, given the President's budget request.

Senator **Cranson**. I can't really understand or accept a standstill in that respect. Given the devastating impact of this condition, with 6,000 to 7,000 deaths, how can we afford to spend no more than $2.8 million?

Dr. **Richmond**. Mr. Chairman, I would like to add if I might, that as you know, fairly significant increases have been recommended for teenage pregnancy and family planning programs which have important implications as the previous testimony and various comments at this hearing have already suggested. In other words, we will be increasing prenatal and postnatal services to young mothers at high risk, particularly of low income backgrounds. Since this is a multifaceted approach, we have had to elect certain priorities and we have felt the problem of teenage pregnancy, with some 600,000 deliveries to teenagers each year, was an important target. By indirection, we believe this will have some implications, and we hope would have some important implications for the reduction in the incidence of this syndrome.

Senator, we have had to make some tough choices under a considerable constraint——

Senator CRANSTON. It seems to me we can't have a regressive situation here, that we have to move forward and take remedial steps where we can.

Let me go on.

You state on page 12 of your testimony, "We support a 3-year extension of this authority at the appropriations levels previously mentioned."

What appropriation levels are you referring to, the $2.8 million figure?

Dr. RICHMOND. Yes, sir. I think it is important to mention again that with the "program support" funds showing up in a different column, what may appear at first glance to be decrease, is actually continuation at the current level.

Senator CRANSTON. Are you suggesting a decrease in the authorization level for fiscal 1979 from the fiscal 1978 authorization of $3.6 million?

Dr. LASHOF. No. The current authorization I believe is at a high enough level.

Senator CRANSTON. Three point six million dollars?

Dr. LASHOF. Yes, that's the authorization level.

Senator CRANSTON. That isn't what we got out of your statement. Your statement refers to the appropriation level: "We support a 3-year extension of this authority at the appropriations level previously mentioned," which is $2.8 million. So you are covering that $3.6 million authorization?

Dr. MARSHALL. Yes.

Dr. RICHMOND. Yes.

Senator CRANSTON. What about 1980 and 1981?

Dr. RICHMOND. The decisions regarding the President's fiscal year 1980 and fiscal year 1981 budget have not yet been made. We support your bill with its "such sums as may be necessary" language.

Senator CRANSTON. Which would buy significantly less by 1981, presuming we don't stop inflation. I don't see how we could except to expand the program on a nationwide focus, considering inflation, at the funding levels——

Dr. RICHMOND. Mr. Chairman, again I would come back to the comment I made earlier, that we think some of the other factors are related to SIDS, previously known factors or problems that we need to get at simultaneously. Therefore, we have made some proposals for significant increases in these areas. We hope these approaches will go hand in hand with the SIDS program——

Senator CRANSTON. We understand you're making progress in research, and perhaps making general advances, but there is this need to reach some people who are not reached, including doctors and law enforcement officials. They need help and counseling and it's not covered. It seems to us we have to take into account those needs and I hope we make adequate progress.

You say that approximately 3,500 families will be offered counseling assistance through the federally-funded information and counseling projects.

How many families were offered such assistance through these projects in fiscal 1976 and 1977, and how many do you expect to serve in fiscal 1979?

Dr. Marshall. About 3,200 were served in the last 2 years——

Senator Cranston. Each year?

Dr. Marshall. Last year.

Senator Cranston. Are you saying that in each of the last 2 years——

Dr. Marshall. Are you asking for 1976 and 1977?

Senator Cranston. Yes.

Dr. Marshall. It was about 3,000 in 1976 and about 3,200 in 1977.

Senator Cranston. What do you expect to do in 1979?

Dr. Marshall. Somewhere between 3,500 and 3,700.

Senator Cranston. Do you have a number for 1978?

Dr. Marshall. The 1978 number is about 3,600. If we are able to fund up to 34 projects, we would estimate it at 4,000 in 1979 who would be served.

Senator Cranston. You would be actually doing that with less money. How do you do that?

Dr. Marshall. The projects get better organized—many projects presently in existence are just doing a better job of covering those States. The incremental costs for doing that are not very much higher.

These projects have been on a very, very tight budget. They have not gotten inflationary increases, but yet they have managed, as most of the programs we support, to increase their productivity as they get more experienced.

Senator Cranston. I'm interested to see if the projects think they can do that well with their limited money.

How many personnel are assigned full time to administer Public Law 93–270 project grant programs?

Dr. Marshall. We have been using about six man-years of effort, and presently that involves about four people who are dedicated to that. They don't do anything else. There are about another two person-years that are used for various places in the Bureau for support activities.

Senator Cranston. Are they all here in HEW?

Dr. Marshall. Yes, sir. They're all in the Bureau of Community Health Services.

Senator Cranston. Would such a staff be sufficient if services were expanded to all States and territories?

Dr. Marshall. I believe so.

Senator Cranston. What are the reasons why autopsies are not always performed on infants who are thought to have died of Sudden Infant Death Syndrome?

Dr. Marshall. Mrs. Norris, I think, probably knows more about that question.

Mrs. Norris. I think there are two or three things to be said in this area. Autopsies, in general, had not been done with great frequency in this country in the past. It's interesting to note that as the adult autopsies are decreasing, infant autopsies, particularly since 1973, that we can document, are also decreasing.

I think the reasons they have not been done in some instances is that funds, through the counties and States, were again subject to priorities. The greatest priority, of course, went for suspicious deaths or criminal deaths and that sort of thing. Infant autopsies took less priority.

I think it has been a matter of education of the parents and professionals as to the value of the autopsy, to learn about the infant's death and its causes.

I think another factor has been that the numbers of qualified people in the country are very limited, in terms of being proficient in doing infant autopsies. I think we are making headway in these areas as demonstrated by the projects.

Senator **Cranston**. It is our understanding there is a lack of uniformity from State to State in their medical examiner or coroner systems, and a corresponding lack of uniformity in the data that is collected from the autopsies performed under the various systems.

Is that the case?

Dr. **Marshall**. Yes, that is the case, and one of the things we have been working on is the development of some criteria and guidelines, so that there will be more commonality and consistency among those.

Senator **Cranston**. Should HEW have a role in developing such increased uniformity?

Dr. **Marshall**. Yes, but it's a role we should share with a number of other groups and organizations. We have been working with the American Academy of Pediatrics and working with medical examiners and coroners in a sort of partnership.

Senator **Cranston**. So you're doing what you can to stimulate it?

Dr. **Marshall**. Yes, sir.

Senator **Cranston**. In order to insure accurate diagnosis of SIDS, and to assist parents in understanding the cause of their child's death, is there a need to establish a centralized tissue examination system for the analysis of specimens which cannot be easily or accurately analyzed in the typical medical examiner's laboratory?

Dr. **Marshall**. The current thinking seems to be it would not be necessary, that most of the techniques that should be used are available in most places, and that there is no need to centralize it. It is more a matter of educating a sufficient number of people so that they apply those tests and think to consider those factors whenever they're doing a postmortem examination.

Senator **Cranston**. Do you think there is any use in carrying out such a system on a pilot project basis, or do you think it's not needed?

Mrs. **Norris**. There has been a discussion of that. As Dr. Marshall says, we are working toward improving the quality of autopsies done on infants in the country.

I would never suggest there would be no value to it. I think there would be. I think the protocols we developed in 1975 for autopsies are a minimal acceptable protocol, and I think a toxicology contract now being completed might suggest procedures that could be used in addition to those protocols.

I know the projects in many areas have been conducting seminars and conferences with pathologists in their areas to improve the quality of autopsies. The possibility of a pilot project for quality monitoring or to learn more about the causes would be——

Senator **Cranston**. I was asking about the matter of a centralized tissue examination system.

Dr. **Richmond**. Mr. Chairman, I think it would be difficult to do that. I think we really achieve so much better results through the consciousness raising that is going on in the professional community and professional organizations. I would pay particular tribute to the many investigators who have come into this field in recent years. The papers they are reading at their scientific meetings is doing much to raise the level of consciousness and professional performance in connection with the investigation of these problems.

But I think that any mandatory centralization would probably be an extremely difficult thing to achieve.

Senator CRANSTON. In regard to counseling, it has been suggested some of the counseling methods that are presently employed prolong rather than alleviate the grief of the SIDS families, and that we should subject these methods to the same rigorous scientific evaluation that we presently apply to other forms of therapy, such as drug therapy.

What is your feeling about that?

Dr. RICHMOND. I think, Mr. Chairman, this is a very difficult area for investigation. However, I know the staff of the National Institute of Child Health and Human Development (NICHD) is interested in allocating some of their research resources to these kinds of investigations.

Obviously, there are many points of view about what works and what does not work. There is so much subjectivity—the whole matter of working through the grief reaction is so subjective and so complex that it does not lend itself readily to objective evaluation. That does not mean we should not try, and our social scientists are, indeed, I think doing better work in this area than we have had performed in the past.

Senator CRANSTON. Who would carry out such an evaluation?

Dr. RICHMOND. Well, I think individual investigators certainly——

Senator CRANSTON. I mean within HEW. Would NICHD or NIMH or the Bureau of Community Health Services, or what?

Dr. RICHMOND. Both NICHD and NIMH certainly have the background and competency for these kinds of studies. Dr. Hasselmeyer might want to make some comments on this.

Senator CRANSTON. Well, I would like to ask if you could look into the possibility of such a study and give us your thoughts for the record as to whether it would be practical and what it would cost.

Dr. HASSELMEYER. Senator Cranston, one of NICHD's research emphasis areas is to look at the behavioral facets of the problem of SIDS and its effect on the family and siblings. We have sponsored two research planning workshops on this topic. One was sponsored in collaboration with the National Institute of Mental Health, on the impact of infant death on parents and siblings. We have the report of the workshop here. This was directed at stimulating the interest of investigators and strengthening the scientific base pertinent to counseling and helping parents, because right now it is done on a hit-and-miss basis and we really don't have a strong scientific base of knowledge for it.

We have a mechanism to work closely with NIMH through the DHEW interagency panel on the Sudden Infant Death Syndrome. This area is of interest to both Institutes and it is one of NICHD's

SIDS emphasis areas. So we have the beginnings for an improved research effort.

I would like to say that at the beginning of the SIDS research program we concentrated on looking at what was causing these babies to die, rather than how parents were affected. We have made good progress in studying etiology, and now we are ready to move into the behavioral aspect of the SIDS program. We have a good foundation laid.

Senator **Cranston**. But you are suggesting we look further into this area?

Dr. **Hasselmeyer**. Oh, definitely. I have the Research Planning Workshop report on the impact of SIDS on parents and siblings. It gives us a good base from which to go forward.

Senator **Cranston**. I would hope that there is enough counseling going on now so that we already have a basis upon which to determine the type of counseling that works and the type that backfires.

Dr. **Hasselmeyer**. We have some information. The counseling and information centers would serve as the sources for research concerned with the behavioral facets of the SIDS problem.

Senator **Cranston**. Two technical changes have been recommended in the SIDS legislation (section 1112(b)(1)) and I would be interested in getting your reaction to such changes.

First, what would be the effect of limiting contracts, as we do grants, to "public and nonprofit, private entities"? The present language permits contracting with "public and private" entities with no stipulation that these private entities be nonprofit.

Dr. **Richmond**. I would suggest, Mr. Chairman, that we have looked predominantly to the nonprofit sector, particularly coalitions of parents and other agency groups in communities, to develop the resources for these programs. I would anticipate that that is the direction in which we should continue to predominate.

Senator **Cranston**. Do you think you should have some flexibility, though, and be permitted under the law to make contracts with "for profit" groups?

Dr. **Richmond**. I am always inclined to feel that more flexibility is better than less flexibility! Of course, I would have to be persuaded that "for profit" groups have a significant program to convey.

Senator **Cranston**. Would you give us a list, for the record, of "for profit" groups with whom contracts have been let, and the amounts?

Dr. **Richmond**. Yes, sir.

Senator **Cranston**. I would just like that for the record. Now, what would be the effect of allowing grants to be made for the purpose of either (A) collecting information related to the cause of SIDS, or (B) providing information and counseling, instead of requiring both (A) and (B) in awarding a grant or contract as the law now appears to require?

If you would look at the section I am referring to section 1121(b)(1), it appears to say you have to do both, not just one or the other.

Dr. **Marshall**. Senator, we believe on the service side of it that it is appropriate and necessary. We have both grant and contract authority, because it may be possible to make grants for some——

Senator **Cranston**. I know you need authority for both, but does a given contract have to cover both?

Dr. **Marshall**. No. A given contract would not have to cover both. There also are justifiable reasons for, in some cases, contracting with a "for profit" firm—for instance, some of the educational materials, some of the audio-visual materials, are more appropriately done by those groups.

Senator **Cranston**. I think this is too complicated to do here, so if you would submit that for the record.

[The following was subsequently supplied for the record.]

1. **Title:** Distribution of Police Training Film entitled A Call for Help

Contractor: International Association of Chiefs of Police, Inc.
(Blair D. Schneider, project director)

Cost: $15,000

Project Period: April 1978 - March 31, 1979

Description: Fiscal year 1978 continuation of this contract is to promote, distribute, maintain in good repair, and provide information about the use of this police training film.

Expected Outcomes: Because of the nature of this film, its distribution must be controlled. During the first year it was continually overbooked. Its reception by police and emergency care providers has been exceptionally good and it is anticipated that the coming year's bookings will be as steady as the first six months of this contract. During the six months of the contract, the film was booked for 459 requests in 51 States with a substantial "back-log" of bookings remaining. Thus far this is the best and most universal educational production for emergency responder groups. Its use to educate is enhanced by the discussion it precipitates which should result in emergency responders becoming more sensitive to families who are in the immediate crisis situation of having lost an infant suddenly and unexpectedly.

2. **Title:** Evaluate the Impact and Effectiveness of the National SIDS Information and Counseling Program

Contractor: Upon satisfactory completion of Phase I of this effort the intent is to continue to contract with Lawrence Johnson and Associates, Inc. (Frederick S. Stinston, Ph.D.)

Cost: $100,000

Project Period: May 1978 - April 1979

Description: Fiscal year 1978 continuation of this contract is to implement the evaluation methodology which was specifically designed to comprehensively assess the extent to which the SIDS Information and Counseling projects are achieving the program objectives. The findings will be instrumental in future program planning.

NICHD SIDS CONTRACTS WITH "for profit" GROUPS

Carnegie-Mellon Institute of Research
Pittsburgh, Pennsylvania

"Research and Development of a Cardiorespiratory Monitor"

Period of Performance: 9/30/77-12/31/78 (15 months)

Amount of Support: $112,435.00

Supplemental Question - unnumbered

Would like a more direct answer to the question of how we interpret section 1121 (b)(1).

Answer

Section 1121 (b)(1) allows DHEW to award grants to public and nonprofit private entities for SIDS projects which include the collection, analysis and dissemination of data relating to the causes of SIDS (section 1121 (b)(1)(A)) and the provision of information and counseling to families affected by SIDS (section 1121 (b)(1)(B)).

DHEW may also enter into contracts with public and private (including for-profit) entities for projects which do both of the functions described in the law.

The projects must perform both section 1121 (b)(1)(A) and (B) functions. The projects awarded by BCHS perform both functions, although there is sometimes more pronounced activity in one area or another, i.e. data collection and dissemination, or provision of information and counseling to families.

The wide flexibility of this authority creates some potential problems. The largest potential problem we see that could be of concern to the Congress and SIDS parent groups, voluntary groups, etc. is the possibility of being able to award a for-profit contract to provide information and counseling to SIDS parents. [We previously responded that we do not intend to use the authority under section 1121 (b) in this manner.]

While the language of this authority does not cause us great concern, we do see that some improvement could be made to clarify the basic intent and avoid any future problems of misunderstanding. Specifically, we would suggest that the information and counseling provision in subparagraph (B) be placed into separate sub-paragraphs. We would also suggest that the funding mechanisms be related to these functions in the manner which is consistent with the best use of each respective mechanism and the way we now make use of these mechanisms, i.e., to give grants to public and non-profit private organizations for counseling and technical information functions and to award contracts for performance primarily of public information functions. We have found that in competitively bid contracts awards that certain for-profit private companies have superior capabilities to perform certain public information functions. Examples may include the making and distribution of films, or the preparation and distribution of curriculum modules.

We attach suggested draft language:

Sec. ___ Section 1121(b) of the Public Health Service Act is amended --

(1) by renumbering paragraphs (2) through (5) as (3) through (6), and

(2) by striking out paragraph (1) and inserting instead the following:

"(b)(1) The Secretary may make grants to public and nonprofit private entities for projects which include both--

"(A) the collection, analysis, and furnishing of information (derived from post mortem examination or other means) relating to sudden infant death syndrome; and

"(B) the provision of counseling to families affected by sudden infant death syndrome.

"(2) The Secretary may enter into contracts with public and private entities for projects described in paragraph (1)(A)."

Senator **Cranston**. Combining the SIDS program and the Maternal and Child Health—title V—Services program has apparently been discussed within the Department.

Since the services presently needed by clients of the SIDS projects are primarily counseling services for SIDS parents and autopsy services for SIDS victims—activities which, it would seem, are not usually components of a title V program—do you agree that it would be premature to combine these programs before a lot more is known about prevention and identification of infants at risk?

Dr. **Richmond**. Yes, Mr. Chairman. I would feel we are not far enough along yet to put the SIDS service programs into the title V program. We think they do have a certain kind of uniqueness. Certainly, as I indicated earlier, they raise the level of consciousness in communities and certainly among the professionals in communities.

While we hope that, over time, many of the title V programs will be making important contributions to prevention and early detection, and possibly even to some management of the SIDS families, we do not think it would be appropriate to homogenize these programs at the present time.

Senator **Cranston**. The separate, categorical program is going to be continued?

Dr. **Richmond**. Yes.

Senator **Cranston**. And you support that for 2 years?

Dr. **Richmond**. Yes.

Senator **Cranston**. On page 8 of your testimony you state that 17 of your projects report an autopsy rate of 80 percent or higher. You state further that in 10 projects, 7 of which are statewide, virtually all infants who die suddenly and unexpectedly are autopsied.

Are these 10 latter projects included in the 17 you first mentioned?

Dr. **Marshall**. Yes, sir.

Senator **Cranston**. Why are the autopsy rates in the remaining 15 projects so low?

Mrs. **Norris**. The autopsy rate, in all of the projects, is higher than the national average. I think the national average now for infants is about 46 to 47 percent. Of all of our projects, more than 52 percent of the infants who die suddenly and unexpectedly are autopsied.

Senator **Cranston**. Would you give us those projects and the autopsy rates?

Mrs. **Norris**. Yes. For 1976 we do have it.

[The information referred to follows:]

What are the rates of infant autopsies in the federally funded SIDS project area? What steps are or will be taken to increase these rates?

It should be noted that the National Center for Vital Statistics reports a national infant autopsy rate of 46.7% in 1975. The present range of infant autopsy rates in the SIDS Information and Counseling project areas for 1976 is from 52% to 100%, with 24 project areas reporting that 80% or more of the infants who die are autopsied.

Infant Autopsy Rate in SIDS
Information and Counseling Project Areas
1976 Date as Reported by Projects

SIDS Projects	% Infants Autopsied
National Average	46.7%
Alabama	80
Arkansas	52
California	98
Colorado	82
Connecticut	96
Florida	92
Illinois	
Loyola	100
State	85
Iowa	100
Maryland	86
Massachusetts	67
Michigan	100
Minnesota	61
Missouri	61
New Hampshire	100
New Jersey	93
New Mexico	100
New York	
N.Y. City	100
Genesis	100
New York	100
North Carolina	100
Ohio	93
Pennsylvania	100
Rhode Island	100
Texas (Houston)	96
Utah	95
Vermont	100
Washington	
Seattle	72
Spokane	100

Senator Cranston. What steps are you taking to increase the rates in those 15?

Dr. Marshall. We have, first of all, some of the educational activities which have already been mentioned. We also permit the projects to pay for autopsies, including the transportation of the body, where there is no other source of funds for paying for the autopsy.

Approximately 4 percent of the cost of the projects at the present time goes toward autopsies. We do not put ceilings on that. We encourage the projects to do what they can to make sure that it happens.

Senator Cranston. Is getting the autopsies a critical part of the project?

Dr. Marshall. Yes, sir.

Senator Cranston. In view of the fact that projects with a statewide focus are apparently able to achieve higher autopsy rates, what plans do you have for expansion of existing projects to statewide projects and the establishment of statewide projects in States and territories not presently served?

Dr. Marshall. We would give the highest priority in funding to projects, and also refunding the current projects, to those who were attempting to expand to a statewide effort.

Senator Cranston. You can't do that under the present——

Dr. Marshall. Yes, we can do that—it is less of a constraint on our ability than if there were funds available.

Senator Cranston. Is there some way we can try to encourage that autopsies be done, where necessary, in States without federally-funded projects?

Dr. Marshall. I think it would not be easy, given the variations in State laws about medical examiners and how much authority medical examiners have. In most States it continues to be voluntary. The persuasiveness of the people involved in relating to the medical examiner is a very important element. The educational activities, I think, will surely address that, and we would hope with some gradual improvement.

However, there always will be a core of people who are opposed to autopsies.

Senator Cranston. Could you give us the autopsy rates for those uncovered States, which I presume would be pretty low?

Mrs. Norris. We will have to get more accurate information from the National Center for Health Statistics. But we will try to provide that.

[The following was subsequently supplied for the record:]

130

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
OFFICE OF HEALTH POLICY, RESEARCH, AND STATISTICS
HYATTSVILLE, MARYLAND 20782

NATIONAL CENTER FOR
HEALTH STATISTICS

March 9, 1978

Ms. Geraldine Norris
Director, SIDS Program
Office of Maternal and Child Health
Health Services Administration
5600 Fishers Lane, Room 7-15
Rockville, Maryland 20857

Dear Gerry,

This is to confirm my conversations with you and Carol Armstrong concerning the availability of autopsy rates for infants deaths and SIDS deaths by State. We do have information on the autopsy rates for infant deaths for the nation for the years 1972 through 1975. The following figures show these rates:

1975	46.7
1974	46.6
1973	45.4
1972	44.1

Prior to 1972, this data was coded but not tabulated.

We have no existing tabulations which show autopsy rates for infant deaths and SIDS deaths by State. However, this information would be available from our public use data tapes which are described in the enclosure. In fact, as you will note on page 11, these tapes would permit one to tabulate SIDS deaths for counties. The tapes can be purchased.

If we were to prepare a special tabulation for you, we would first request that you ask for a cost estimate. Currently, special tabulations take about four weeks.

If you have further questions, please feel free to call me.

Sincerely yours,

Drusilla Burnham
Statistician
Mortality Statistics Branch
Division of Vital Statistics

Enclosure

National Center for Health Statistics

Standardized Micro-Data Tape Transcripts

—Available in 1976—

DHEW Publication No. (HRA) 76-1213

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Health Resources Administration
National Center for Health Statistics
Rockville, Md. February 1976

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 Price 65 cents
Stock Number 017-022-00479-8

PREFACE

This publication describes a number of micro-data tapes which are available from the National Center for Health Statistics in 1976.

The tapes are a response to many requests from consumers who require data in a format or detail that are not provided in the Center's publications. It recognizes also the Center's uniqueness as a source of certain kinds of data related to the health of the American people. Because of the national scope and the continuing nature of the Center's data collection systems, its data are both a valuable and an unduplicated resource for research and other purposes. As with any material produced by the Center, the Standardized Micro-Data Tape Transcripts are equally available to all requestors.

In the preparation of the computer tapes and the accompanying documentation, we have worked toward two primary objectives: First, to achieve full adherence to the stringent standards of confidentiality of information provided for in law and in NCHS policy; and second, to provide all feasible direction for understanding and working with tapes.

We are confident of success with the first objective. We hope that users of the tapes will rate us reasonably high on the second.

Clearly, the Center cannot accept responsibility for the interpretations and conclusions which others may base on the data. In this respect and some others, we ask that users of the tapes follow certain "guidelines" set forth in the publication. Their cooperation will enable us to know more about how and for what purposes the data are used. This, coupled with greater experience in the distribution of data tapes, hopefully, will enable the Center to meet better its obligations for the dissemination of health statistics.

CONTENTS

Page

Introduction 1

Guidelines 2

General Information 2

Data on Health Manpower and Facilities 3
  Family Planning Service Sites 4

Data on Health Resources Utilization 5
  Hospital Discharge Survey 5
  The National Ambulatory Medical Care Survey 6

Data on Vital Events 8
  Natality Data 8
  Mortality Data 11
  Marriage Data 12
  Divorce Data 13

Data From the National Natality and Mortality Followback Surveys 15

Data From the Health Interview Survey 20

Data From the Health Examination Survey 23
  Cycle I Data—Adults 23
  Cycle II Data—Children, 6-11 27

Order Form 29

INTRODUCTION

The National Center for Health Statistics (NCHS) is the primary source of statistical data on vital events, health, and related matters pertaining to the American people. Data are obtained from a number of statistical data collection systems: The national vital registration system, covering births, deaths, fetal deaths, marriages, and divorces; surveys based on samples of birth and death records; a continuing nationwide survey of households by means of interviews; a series of national surveys based on physical examinations of samples of the population; periodic surveys of institutions and their patients or residents; a continuous national sampling of short-stay hosptial records; and surveys of various categories of health manpower based on license renewals, reports from establishments, and other sources.

A guiding tenet of NCHS is to disseminate the statistical data it gathers to all concerned consumers as promptly as resources and time will permit. The principal forms used are published reports, special and unpublished tabulations, and computer Standardized Micro-Data Tape Transcripts.

The published report is and will continue to be the primary method used to distribute data. These reports are in several series including the annual volumes *Vital Statistics of the United States*, the *Monthly Vital Statistics Report*, and the *Vital and Health Statistics* series.

Special and unpublished tabulations are not covered in this announcement. Information concerning them can be obtained by contacting directly the division responsible for the data of interest.

NCHS policy is to release Standardized Micro-Data Tape Transcripts for elementary units (persons, events or business establishments) when that can be done with existing resources and in a manner that will not in any way compromise the confidentiality guaranteed the respondents who supplied the original data. Principal steps taken to protect confidential information include:

A. Personal names and addresses, except for some institutional records, never appear on the data tapes.

B. Certificate numbers for the vital records never appear on the tape records.

C. Data from localities having less than 250,000 population are classified into geographic areas which reflect population size but do not reveal specific geographic names.

The term "Standardized Micro-Data Tape Transcripts" has been adopted to emphasize a policy which tends to yield a maximum output of data for elementary units. Each available data set has a fixed-content, fixed-format Standardized Micro-Data Tape with appropriate documentation. This minimizes communication problems between NCHS and users of the data and, in particular, avoids wasteful, time-consuming expenditures of manpower that would be required if NCHS attempted to provide separate tailor-made tapes to different users.

Guidelines

With the goal of mutual benefit, NCHS requests the cooperation of recipients of data tapes in certain actions related to their use:

A. Any published material derived from the data should acknowledge the National Center for Health Statistics as the original source. It should include also a disclaimer which credits any analyses, interpretations, or conclusions reached to the author (recipient of the tape) and not to NCHS, which is responsible only for the initial data.

B. Consumers who wish to publish a technical description of the data will make a reasonable effort to insure that the description is not inconsistent with that published by NCHS. This does not mean, however, that NCHS will review such descriptions.

General Information

At present approximately 80 data sets are available for purchase. The content of each is given in detail in the following pages.

The data are in 9-track code, either EBCDIC alone or in combination with binary code. Tapes can be made available at a density of either 800 or 1600 bpi as specified by requestor. NCHS does not convert the data tapes to any other code formats. Record lengths, blocksizes, number of records, and number of tape volumes are given in the documentation that accompanies the tape as well as in the detailed descriptions.

The purchase price listed includes the cost of the magnetic tape volumes, the printed materials explaining the tape content, and the documentation necessary to utilize the files.

Except for Federal agencies, checks for the purchase price should be made to Department of Health, Education, and Welfare, PHS. The purpose "Special Statistical Studies" should appear on the face of the check. Federal agencies will be billed.

An order form on page 29 lists available data sets. Purchasers will note that the form includes a statement of assurance that the data will be used solely for statistical research or reporting purposes. This statement is included in order for the Secretary to meet the requirements of section 308(d) of the Public Health Service Act, 42 U.S.C. 242m, as added to the Act by Public Law 93-353, the Health Services Research, Health Statistics, and Medical Libraries Act of 1974 (formerly section 305 of the PHS Act) which provides that no information obtained through a statistical collection activity under NCHS authority may be used for any purpose other than the purpose for which it was supplied.

The Order Form and requests for additional information should be addressed to:

Scientific and Technical
Information Branch
National Center for Health Statistics
5600 Fishers Lane
Parklawn Building, Room 8-20
Rockville, Maryland 20852

Data Years Available. Data are available for 1968 through 1973. Data prior to 1968 are not available.

Mortality Data

Coverage. Mortality data for the United States are limited to deaths registered within the death registration system and include deaths occurring to nonresidents of the United States. The data do not cover deaths of U.S. civilians or members of the Armed Forces occurring outside the system.

General Description. Presently available to release are data obtained from microfilm copies of certificates filed for deaths occurring in 1968 through 1973. Demographic and medical information includes classification by place of occurrence and residence, age, race, sex, and underlying cause of death. Cause of death is classified in accordance with the *International Classification of Diseases.*[3] Beginning with 1970 data, geographic areas are classified as defined for the 1970 census enumeration. Place of occurrence is classified by State and county. In residence classification all

Table 6. Summary of 1968-73 mortality data tapes by type of file.

Detail	*Local Area Summary*	*Cause-of-Death Summary*
Data year Residence of decedent[1] State County City (250,000+) Population size SMSA Met/Nonmet Age at death (single years) Day of death (1972-73) Month of death Place of death (State, county) Race: 1968 (7 categories) 1969 (9 categories) Sex Underlying cause of death Each cause Whether autopsy performed (1972-73) Whether findings used (1972-73)	*Stub Variables:* Residence of decedent[1] State County City (10,000+) Popupation size SMSA Met/Nonmet Underlying cause of death Recoded to 69 causes of death *Spread Variables:* Total number of deaths	*Stub Variables:* State of residence[1] Sex Race 1968 (7 categories) 1969-73 (9 categories) Underlying cause of death Each cause *Spread Variables:* Age at death: 5 year age groups Single years under 5 years of age Month of death

Size descriptors of mortality data tapes by type of file

Record length	160	28	194
Blocksize	3,200	1,400	1,940
Approximate number of records	1,900,000	180,000	180,000
1600 bpi	10	1	1
800 bpi	20	2	2

[1] Beginning in 1970 the place of residence for decedents who were nonresidents of the United States is coded to the country of residence (8 categories). Formerly these deaths were considered resident deaths of the place of occurence.

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[3] Eighth Revision International Classification of Diseases Adapted for Use in the United States (Public Health Service Publication No. 1693) used in coding cause-of-death data is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Vol. I, Tabular List, is $9.40; Vol. II, Alphabetic Index, is $9.45.

deaths are allocated to the usual place of residence of the decedent as reported on the death certificate. In place of residence classification all areas are arranged alphabetically by State, county, and city.

Beginning in 1970 the place of residence for decedents who were nonresidents of the United States is coded to the country of residence (8 categories). Formerly these deaths were considered resident deaths of the place of occurrence.

In the detail file there is one tape record for each death that occurred for all years except 1972 for which there is one tape record in the 50 percent sample processed that year. Death certificate numbers are not on the tapes. Table 6 lists the items in the data file for 1968 -1973.

Mod 1 1/2

Cost. Three data tape files (detail file, local area summary, and cause-of-death summary) are available for each year. Each data tape package contains all necessary documentation, including tape content.

The cost of the packages for each year:

1. Detail file: $395
2. Local area summary: $70
3. Cause-of-death summary: $115

Delivery Time. Approximately 4 weeks after receipt of the request.

Data Years Available. Data from 1968 through 1973 are available now. Data for future years will become available as the data are processed. Data prior to 1968 are not available.

Marriage Data

Coverage. Marriage data are based on samples of marriage certificates obtained from States meeting reporting criteria for the marriage registration area (MRA). In 1968 the MRA covered 39 States and the District of Columbia. South Carolina and Minnesota were included beginning in 1971.

Marriage statistics are limited to events occurring during the year and registered within the specified areas. Marriages occurring to nonresidents of the United States in these areas are included, while marriages occurring to U.S. citizens outside these areas are excluded.

Table 7. Summary of 1968-73 marriage data tapes.

Data year

Age of:
  Bride
  Groom
Date of birth: (month/year)
  Bride
  Groom
Date of marriage: (month/day)
Date last marriage ended:[1] (1970-73)
  Bride
  Groom
Education of:[1] (1970-73)
  Bride
  Groom
Number of this marriage:
  Bride
  Groom
Previous marital status of:
  Bride
  Groom
Race of:[1]
  Bride (3 categories)
  Groom (3 categories)
State of birth: (1969-73)
  Bride
  Groom
State of marriage
State of residence of:[2]
  Bride
  Groom
Type of ceremony (1972-73)

Size descriptors of marriage data tapes

Record length	140
Blocksize	2,800
Approximate number of records	288,000
Number of tapes for each data year:	
1600 bpi	2
800 bpi	4

---

[1] Applicable only for those States having information on the certificate.

[2] Beginning in 1970 the place of residence for brides or grooms who are nonresidents of the United States is coded to the country of residence (8 categories). Formerly these persons were considered resident brides or grooms of the place of occurrence.

General Description. Demographic information includes geographic (States only) classification, age, race, sex, and pre-

NOTE TO PURCHASER

Individual identifiers have been removed from the micro-data tapes available from NCHS. Nevertheless, under section 308(d) of the Public Health Service Act, 42 U.S.C. 242m, (formerly section 305 of the Public Health Service Act), such information may not be used for any purpose other than the purpose for which it was supplied. The information on the micro-data tapes available for purchase was supplied to NCHS for statistical research and reporting purposes. It is necessary therefore that the individual ordering such micro-data tapes sign the following assurance:

The undersigned gives assurance to NCHS that micro-data tapes being ordered will be used solely for statistical research or reporting purposes.

Signed: ________________________________
Title: ________________________________
Organization: ________________________________
Date: ________________________________

TO RETURN ORDER FORM CUT ALONG LINE

This page may be used for ordering data sets. Simply detach from publication (or copy), indicate those data sets you want, put your name and address at bottom of page, enclose payment and send to address given on page 2.

ORDER FORM

No.	*Data Sets available from NCHS in 1976*	*Cost of Data Set*	*No.*	*Data Sets available from NCHS in 1976*	*Cost of Data Set*
1a	Master Facility Inventory Data, hospital 1971-74, (Specify year)	$200	5a	Vital Statistics Natality, detail, 1968-73, (Specify year)	395
1b	Master Facility Inventory Data, nursing home, 1971	200	5b	Vital Statistics Natality, local area summary, 1968-73, (Specify year)	70
1c	Master Facility Inventory Data, other health facilities, 1971	200	5c	Vital Statistics Natality, State summary, 1968-73, (Specify year)	70
1d	Master Facility Inventory Data, nursing homes and other health facilities 1973	200	6a	Vital Statistics Mortality, detail, 1968-73, (Specify year)	395
2a	National Inventory of Family Planning Service Sites, 1974	200	6b	Vital Statistics Mortality, local area summary, 1968-73 (Specify year)	70
3a	Hospital Discharge Survey Data, 1969-73, (Specify year)	200	6c	Vital Statistics Mortality, cause-of-death summary, 1968-73, (Specify year)	115
4a	National Ambulatory Medical Care Data	200	7a	Vital Statistics Marriage, detail, 1968-73, (Specify year)	70

Density desired: ☐ 800 bpi ☐ 1600 bpi

ORDER FORM—Con.

No.	*Data Sets available from NCHS in 1976*	*Cost of Data Set*	*No.*	*Data Sets available from NCHS in 1976*	*Cost of Data Set*
8a	Vital Statistics Divorce, detail, 1968-73, (Specify year)	70	15a	Health Examination Survey, Cycle I, psychological	150
9a	Followback Survey, Natality, 1964-66	60	16a	Health Examination Survey, Cycle I, physical	150
10a	Followback Survey, Natality, 1967-69, (Specify year)	60	17a	Health Examination Survey, Cycle I, cardiovascular	150
11a	Followback Survey, Infant Mortality, 1964-66	60	18a	Health Examination Survey, Cycle I, arthritis	150
12a	Followback Survey, Mortality, 1966-68	60	19a	Health Examination Survey, Cycle I, dental	150
13a	Health Interview Survey, 1969-71, (Specify year)	600	20a	Health Examination Survey, Cycle II (all).	300
14a	Health Examination Survey, Cycle I, demography	100			

Density desired: ☐ 800 bpi ☐ 1600 bpi

Send indicated data sets to:

TO RETURN ORDER FORM CUT ALONG LINE

U. S. GOVERNMENT PRINTING OFFICE : [illegible]

Senator CRANSTON. You state on page 10 of your testimony that the topic of sudden infant death syndrome and its associated effects is becoming increasingly evident in the curricula of numerous health disciplines, emergency service providers, and law enforcement programs.

Could you please provide for the record the basis for this statement?

Dr. RICHMOND. Yes, sir, we will do that.

The information regarding the extent to which SIDS has been incorporated in the curricula of educational programs of schools, emergency service providers, law enforcement programs, et cetera, is not known to us in total and would be difficult to collect. We do know from personal observation and from the reports of projects and through contacts with the schools and agencies mentioned that the frequency of the inclusion of SIDS in training programs is increasing.

Senator CRANSTON. And on research, could you also provide for the record a list of all the research projects primarily related to SIDS and all research projects that are secondarily related?

Dr. RICHMOND. Yes, sir, we will have that done.

[The material referred to follows:]

NICHD Obligations for Research Grants and Contracts Related Specifically to SIDS - FY 1977

A. Research Grants

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
5 R01 07276-04	Downing, S. Evans Yale U. New Haven, Conn.	Chemosensitive Systems in Sudden Infant Death	7/ 1/77	$63,657
2 R01 08339-04	Dement, William C. Stanford U. Stanford, Calif.	Sudden Infant Death Syndrome and Sleep Apnea	6/ 1/77	199,920
5 R01 08465-03	Sinha, Sachchida N. Loyola U. Maywood, Ill.	Development of Cardiac Autonomic Control & the SIDS	6/ 1/77	450
5 R01 08639-03	Harned, Herbert Spencer, Jr. North Carolina, U. of Chapel Hill, N.C.	Effects of Swallowing on Perinatal Respiration	6/ 1/77	33,273
5 R01 08693-04	Halstead, Scott B. Hawaii, U. of Honolulu, Hawaii	Infection Enhancement--An Experimental Model of SIDS	6/ 1/77	52,482
5 R01 08796-03	Schwartz, Peter J. Milan, U. of Milan, Italy	Experimental Reproduction of Long QT Syndrome & SIDS	6/ 1/77	3,216
5 R01 09067-03	Krauss, Alfred N. Cornell U. New York, N.Y.	Control of Breathing in Premature Infants	6/ 1/77	26,480

NICHD Obligations for Research Grants and Contracts Related Specifically to SIDS - FY 1977
(continued)

A. Research Grants (cont'd.)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
5 R01 09297-03	Peterson, Donald R. Washington, U. of Seattle, Wash.	Genetic Susceptibility to Sudden Infant Death	6/ 1/77	$55,259
5 R01 09324-03	Mars, Harold Case Western Reserve U. Cleveland, Ohio	Biogenic Amine Metabolism in Apnea & Crib Death	12/ 1/76	36,310
5 R01 09368-03	Bonner, R. Alan Maine, U. of Portland-Gorham Portland, Maine	Infant Cardiorespiratory Reflexes - SIDS Model	6/ 1/77	83,491
5 R01 09494-03	Sasaki, Clarence T. Yale U. New Haven, Conn.	Postnatal Respiratory Development as Related to SIDS	6/ 1/77	71,227
5 R01 09841-03	Miller, Arthur J. California, U. of San Francisco, Calif.	Aspects of Respiratory Control	6/ 1/77	18,432
5 R01 09981-02	Crowell, David H. Hawaii, U. of Honolulu, Hawaii	Neonatal Neurophysiology and Metabolic Derangement	6/ 1/77	104,353
5 R01 10088-02	Ogra, Pearay L. Children's Hosp. of Buffalo Buffalo, N.Y.	Etiologic Aspects of Sudden Infant Death Syndrome	5/ 1/77	86,782

NICHD Obligations for Research Grants and Contracts Related Specifically to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
5 R01 10135-02	Maloney, John E. Baker Med. Res. Inst. Prahran, Australia	Development of the Respiratory System	7/ 1/77	$37,002
5 R01 10183-02	Lardy, Henry A. Wisconsin, U. of Madison, Wis.	P-Enolpyruvate Carboxykinase and Sudden Infant Death	6/ 1/77	51,974
1 R01 10311-01	Frankfater, Allen Loyola U. Maywood, Ill.	The Biochemistry of Autonomic Control and SIDS	12/ 1/76	33,571
1 R01 10340-01	Guntheroth, Warren G. Washington, U. of Seattle, Wash.	Hypoxia in Sudden Infant Death Syndrome	3/ 1/77	64,166
1 R01 10356-01	Woodrum, David E. Washington, U. of Seattle, Wash.	Etiology of Recurrent Apnea and SIDS	6/ 1/77	84,618
1 R01 10434-01	Stahlman, Mildred T. Vanderbilt U. Nashville, Tenn.	Apnea and SIDS from the Laryngeal Chemoreflex	12/ 1/76	59,029
1 R01 10562-01	Silverstein, Richard Kansas, U. of Kansas City, Kans.	PEP Carboxykinase in Sudden Infant Death Syndrome	12/ 1/76	34,965

NICHD Obligations for Research Grants and Contracts Related Specifically to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
1 R01 10761-01	Taylor, Eugene M. Virginia Mason Res. Ctr. Seattle, Wash.	Hypoxemia in Infant Primates	4/ 1/77	$127,389
1 P50 10982-01	Steinschneider, Alfred Maryland, U. of Baltimore, Md.	Biological and Psychological Aspects of SIDS	9/30/77	615,625
1 R01 11081-01	Bradley, Robert M. Michigan, U. of Ann Arbor, Mich.	Role of Taste Buds in Sudden Infant Death Syndrome	9/30/77	52,082
7 R01 11671-01	Seto, Dexter S. Kapiolani Hospital Honolulu, Hawaii	Viral Hypersensitivity in Sudden Infant Death Syndrome	9/ 1/77	65,709
7 R01 11923-01	Sinha, Sachchida N. Illinois, U. of Peoria, Ill.	Development of Cardiac Autonomic Control & the SIDS	9/ 1/77	31,132

NICHD Obligations for Research Grants and Contracts Related Specifically to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		B. Research Contracts		
3 N01 22777-12 3 N01 22777-13	Hodgman, Joan E. Los Angeles County Hlth. Ser. Dept. Los Angeles, Calif.	Developmental Phenomena and the Occurrence of SIDS	12/ 1/76 4/ 1/77	$93,171 47,170
5 N01 32772-08	Johnson, Paul Oxford, U. of Oxford, England	Development of Animal Model for Studies of SIDS	9/ 1/77	84,540
2 N01 32789-06	Gould, Jeffrey B. Boston U. Boston, Mass.	Possible Neurophysiologic Factors for SIDS in Twins	11/ 1/76	259,099
3 N01 42810-08 3 N01 42810-09 3 N01 42810-10	Sterman, M. B. California, U. of Los Angeles, Calif.	Developmental Phenomena and the Occurrence of SIDS	11/ 1/76 4/ 1/77 10/ 1/77	134,667 144,903 8,772
2 N01 52853-02	Henning, Lois B. New York, State U. of Syracuse, N.Y.	Sleep Apnea and SIDS: Developmental Correlates	6/30/77	84,364
2 N01 52855-03	Weitzman, Elliot D. Montefiore Hosp. & Med. Ctr. New York, N.Y.	Evaluation & Follow-up of Selected Parameters in Infants	9/30/77	349,570
3 N01 52856-06 2 N01 52856-07	Mellins, Robert B. Columbia U. New York, N.Y.	Evaluation & Follow-up of Selected Parameters in Infants	7/ 1/77 9/ 1/77	59,754 259,840

NICHD Obligations for Research Grants and Contracts Related Specifically to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		B. Research Contracts (cont'd.)		
5 N01 62845-01	Naeye, Richard L. Pennsylvania State U. Hershey, Pa.	Analysis of Several Proposed Causes of SIDS	6/30/77	$38,325
1 N01 72839-00	Peterson, Donald R. Washington, U. of Seattle, Wash.	SIDS Risk Factor Cooperative Study	9/30/77	199,609
1 N01 72840-00	Kraus, Jess F. California, U. of Davis, Calif.	SIDS Risk Factor Cooperative Study	9/30/77	172,000
1 N01 72841-00	Janerich, Dwight T. Health Research Inc. Albany, N.Y.	SIDS Risk Factor Cooperative Study	9/30/77	94,158
1 N01 72842-00	Pakter, Jean Med. & Hlth. Res. Assn. of New York City, Inc. New York, N.Y.	SIDS Risk Factor Cooperative Study	9/30/77	184,500
1 N01 72843-00	Goldberg, Julius Loyola U. Maywood, Ill.	SIDS Risk Factor Cooperative Study	9/30/77	182,514

NICHD Obligations for Research Grants and Contracts Related Specifically to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		B. Research Contracts (cont'd.)		
1 N01 72844-00	Hillman, Laura S. St. Louis Maternal & Child Health Council St. Louis, Mo.	SIDS Risk Factor Cooperative Study	9/30/77	$70,467
1 N01 72846-00	Krasner, Jerome L. Carnegie-Mellon U. Pittsburgh, Pa.	Research and Development of a Cardiorespiratory Monitor	9/30/77	112,435

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants		
2 R01 00384-20	Smith, Richard T. Florida, U. of Gainesville, Fla.	Ontogeny of Immune Mechanisms	9/ 1/77	$126,006
5 P01 00781-14	Battaglia, Frederick C. Colorado, U. of Denver, Colo.	Studies on Prematurity	5/ 1/77	61,866
2 R01 01687-12	Alford, Charles A. Alabama, U. of Birmingham, Ala.	Chronic Perinatal Infections and Human Maldevelopment	12/ 1/76	34,936
2 P30 01799-13	Purpura, Dominick P. Yeshiva U. New York, N.Y.	Support for Mental Retardation Research Center	9/ 1/77	31,800
2 P30 02274-12	Emanuel, Irvin Washington, U. of Seattle, Wash.	Research in Mental Retardation and Child Development	9/ 1/77	153,648
5 R01 02296-12	Barnet, Ann B. Children's Hosp. Nat. Med. Ctr. Washington, D.C.	Sensory Evoked EEG & Behavioral Responses in Children	5/ 1/77	102,791
5 P30 02528-11	Schiefelbusch, Richard L. Kansas, U. of Lawrence, Kans.	Program for a Research Center in Mental Retardation	1/ 1/77	24,171

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
5 R01 02644-10	Auld, Peter A. M. Cornell U. New York, N.Y.	Functional Aspects of Pulmonary Immaturity	9/ 1/77	$48,767
5 R01 02871-11	Weinhold, Paul A. Michigan, U. of Ann Arbor, Mich.	Phospholipid Metabolism During Development	5/ 1/77	42,380
5 R01 04270-09	Fisher, Delbert Arthur Los Angeles County Health Ser. Dept. Torrance, Calif.	Thyroid Function in the Fetus and Newborn	6/ 1/77	134,946
3 R01 04380-06S1 3 R01 04380-06S2 3 R01 04380-06S3	Gluck, Louis California, U. of at San Diego La Jolla, Calif.	Biochemical Development of Surface Activity of Lung	5/ 1/76 7/ 1/77 9/ 1/77	16,487 19,060 10,332
5 R01 04434-07	Balis, John U. Loyola U. Maywood, Ill.	Ultrastructure of Normal and Altered Surfactant	7/ 1/77	72,980
5 R01 04946-06	Novak, Milan Miami, U. of Miami, Fla.	Adipose Tissue Metabolism in Abnormal Newborns	5/ 1/77	141,173
5 R01 06201-06	Demers, Laurence M. Pennsylvania State U. Hershey, Pa.	Nutrition & Hormonal Influences on Lung Maturation	9/ 1/77	39,851

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
5 R01 06311-06	Brumley, George W. Duke U. Durham, N.C.	Lung Lecithin Synthesis	5/ 1/77	$87,792
5 R01 06335-05	Fisher, Delbert Arthur Los Angeles County Hlth. Ser. Dept. Torrance, Calif.	Vasopressin Physiology in the Fetus and Newborn	5/ 1/77	67,685
5 R01 06619-05	Creasy, Robert K. California, U. of San Francisco, Calif.	Responses of the Growth Retarded Fetus to Acute Stress	9/ 1/77	86,101
3 R01 06634-03S1	Hamburger, Robert N. California, U. of at San Diego La Jolla, Calif.	Development and Genetics of IgE and Allergy	7/ 1/77	12,900
5 R01 06775-05	Baum, David Stanford U. Stanford, Calif.	Hypoxia, Metabolism and Neonatal Thermoregulation	9/ 1/77	97,498
5 R01 06915-05	Metcoff, Jack Oklahoma, U. of Oklahoma City, Okla.	Maternal Malnutrition and Fetal Development	5/ 1/77	252,479

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977

(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
5 R01 07377-04	Quilligan, Edward J. Southern California, U. of Los Angeles, Calif.	Mechanisms of Fetal Cerebral Vascular Control	3/ 1/77	$38,592
2 R01 07752-04	Schlamowitz, Max Texas, U. of Houston, Tex.	Cell Membrane Receptors for Maternofetal Transfer of IgG	12/ 1/76	55,094
5 R01 07901-10	Cohen, Nicholas Rochester, U. of Rochester, N.Y.	Comparative and Developmental Immunology	9/ 1/77	51,771
2 R01 08061-02	Tyson, John E. Johns Hopkins U. Baltimore, Md.	Human Fetal Homeostasis: Osmoregulation by Prolactin	1/ 1/77	64,035
2 R01 08195-03	Denenberg, Victor H. Connecticut, U. of Storrs, Conn.	Consequences of Infant Risk Factors	6/ 1/77	81,886
2 R01 08415-04	Hammerling, Ulrich G. Sloan-Kettering Inst. for Cancer Res. New York, N.Y.	Induction of T-Lymphocyte Differentiation	3/ 1/77	91,432
5 R01 08499-03	Zeman, Frances J. California, U. of Davis, Calif.	Thyroid Axis Development in Fetal Protein Deprivation	6/ 1/77	56,813

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
5 R01 08529-03	Taeusch, H. William, Jr. Children's Hosp. Med. Ctr. Boston, Mass.	Pulmonary Surfactant Regulation in Fetus and Newborn	12/ 1/76	$133,446
3 R01 08633-03S1	Sackett, Gene P. Washington, U. of Seattle, Wash.	Prematurity in Primates: Causes, Effects, Prevention	6/ 1/77	14,511
5 R01 08662-04	Gill, Thomas J., III Pittsburgh, U. of Pittsburgh, Pa.	Maternal-Fetal Interactions and the Immune Response	9/ 1/77	89,574
3 R01 08966-02S1	Rosen, Mortimer G. Case Western Reserve U. Cleveland, Ohio	Early Diagnostic Studies of Aberrant Development Study	7/ 1/77	41,610
5 R01 08981-03	Wangensteen, O. Douglas Minnesota, U. of Minneapolis, Minn.	Blood-Gas Barrier Studies in Fetal & Neonatal Lungs	6/ 1/77	29,587
5 R01 09139-03	Pitt, Jane Columbia U. New York, N.Y.	Milk & Passive Cellular Immunity of the Newborn	9/ 1/77	48,650
3 R01 09333-02S1 5 R01 09333-03	Wright, Richard K. California, U. of Los Angeles, Calif.	Ontogeny and Evolution of Immunocompetent Cells	11/ 1/76 5/ 1/77	2,961 69,589

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
5 R01 09338-03	Ellingson, Robert J. Nebraska, U. of Omaha, Nebr.	Longitudinal Study of EEG's and EP's of Infants	6/ 1/77	$93,605
5 R01 09457-02	Purves, Michael J. Bristol, U. of Bristol, England	The Control of Breathing Before and After Birth	3/ 1/77	51,932
5 R01 09461-03	Robinson, Stephen E. Hahnemann Med. Coll. & Hosp. of Phila. Philadelphia, Pa.	Developmental Fetal ECG	5/ 1/77	83,000
5 R01 09588-02	Fenton, Lawrence J. Arizona, U. of Tucson, Ariz.	Group B Streptococcal Infections in the Newborn	6/ 1/77	61,845
5 R01 09677-02	Erenberg, Allen P. Iowa, U. of Iowa City, Iowa	Thyroid Hormones and the Fetal and Neonatal Lung	4/ 1/77	63,114
5 R01 09686-03	Martin, Chester B., Jr. Los Angeles County Health Ser. Dept. Los Angeles, Calif.	Fetal Physiology and Metabolism in Primates	9/ 1/77	86,852

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
5 R01 09820-02	Kittinger, George W. Medical Research Fdn. of Oregon Portland, Oreg.	Endocrine Control of Development in the Rhesus Fetus	5/ 1/77	$65,448
5 P01 09938-03	Fudenberg, Hugh H. South Carolina, Medical U. of Charleston, S.C.	Immunologic Studies of Genetic Disease and Human Development	6/ 1/77	73,744
5 R01 09970-02	Taeusch, H. William, Jr. Boston Hosp. for Women Boston, Mass.	Prevention of RDS with Prenatal Glucocorticoids	5/ 1/77	86,251
5 R01 09980-02	Parer, Julian T. California, U. of San Francisco, Calif.	Fetal Heart Rate Patterns and Fetal Oxygenation	5/ 1/77	71,376
5 R01 09998-02	Hillman, Laura S. Washington U. University City, Mo.	Clinical Correlations to Vitamin D Status in Infants	6/ 1/77	45,798
5 R01 10029-02	Gilbert, Raymond D. Loma Linda U. Loma Linda, Calif.	Adaptations of the Fetal Cardiovascular System	5/ 1/77	62,866
5 P01 10034-02	Metcalfe, James Oregon, U. of Health Science Ctr. Portland, Oreg.	Respiration During Development	6/ 1/77	117,352

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
5 R01 10137-02	Mattioli, Leone F. Kansas, U. of Kansas City, Kans.	Fetal Renin System in Hypoxic and Hypovolemic Stress	6/ 1/77	$16,889
5 R01 10138-02	Hobbins, John C. Yale U. New Haven, Conn.	Systolic Time Intervals in the Human Fetus and Newborn	9/ 1/77	13,465
5 R01 10139-02	Hung, Kuen-Shan Kansas, U. of Kansas City, Kans.	Development of Pulmonary Innervation	9/ 1/77	23,036
5 R01 10192-02	Rooney, Seamus A. Yale U. New Haven, Conn.	Effect of Hormones on Lung Phospholipid Biosynthesis	9/ 1/77	131,759
1 R01 10260-01	Essien, Francine B. Rutgers, The State U. New Brunswick, N.J.	Study of a Lethal Mutation Affecting Lung Development	1/ 1/77	94,165
5 R01 10314-02	Funkhouser, Jane D. South Alabama, U. of Mobile, Ala.	Lung Development and Differentiation in Organ Culture	5/ 1/77	42,859
5 R01 10366-02	Kikkawa, Yutaka New York Medical Coll. New York, N.Y.	Alveolar Type II Epithelial Cells in Health and Disease	12/ 1/76	146,122

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
1 R01 10595-01	Koler, Robert D. Oregon, U. of Health Science Center Portland, Oreg.	Gas Transport in the Fetal and Postnatal Circulation	1/ 1/77	$51,890
1 R01 10611-01	Siegel, Sharon Los Angeles County Health Ser. Dept. Torrance, Calif.	Development of the Renin-Mineralocorticoid System	7/ 1/77	101,325
1 R01 10622-01A1	Gluck, Louis L. California, U. of at San Diego La Jolla, Calif.	Surfactant: Biochemical Development and Stabilization	9/30/77	158,362
5 R01 10670-02	Rhoades, Rodney A. Indiana U. Indianapolis, Ind.	Nutrition and Hormone Interaction in Lung Development	6/ 1/77	45,064
5 R01 10682-02	Drummond, Willa H. California, U. of San Francisco, Calif.	Mechanisms of Fetal and Neonatal Asphyxic Syndromes	6/ 1/77	38,568
1 R01 10993-01	Thach, Bradley T. Washington U. University City, Mo.	Control of Breathing in Recovery from Apnea	9/30/77	71,093

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
1 R01 11018-01	Rooney, Seamus A. Yale U. New Haven, Conn.	Pulmonary Surfactant Production in the Newborn Rabbit	9/ 1/77	$91,210
1 P50 11089-01	Adam, Peter A. Case Western Reserve U. Cleveland, Ohio	Disordered Fetal Metabolism: Antenatal Intervention	7/ 1/77	45,761
1 R01 11179-01	Turpen, James B. Pennsylvania State U. University Park, Pa.	Developmental Analysis of Lymphopoiesis	7/ 1/77	73,863
1 R01 11192-01	Ivey, Hallam H. Virginia, U. of Charlottesville, Va.	The Use of Nebulized Surfactants in Treatment of RDS	9/15/77	80,390
1 R01 11251-01	Bissonnette, John M. Oregon, U. of Health Science Center Portland, Oreg.	Control of Fetal Breathing Movements	7/ 1/77	44,778
1 R01 11632-01	Galioto, Frank M., Jr. Children's Hosp. Nat. Medical Center Washington, D.C.	Infant Lung and Heart Study by the Rebreathing Method	9/ 1/77	33,134
7 R01 11697-01	Aprille, June R. Tufts U. Medford, Mass.	Development of Neonatal Thermoregulation	9/ 1/77	66,488

NICHD Obligations for Research Grants and Contracts Related Generally to SIDS - FY 1977
(continued)

Application or Proposal Number	Principal Investigator Institution Location	Title	Start Date	Funds
		A. Research Grants (cont'd.)		
1 R01 11932-01	Jobe, Alan H. Los Angeles County Health Ser. Dept. Torrance, Calif.	Lung Phospholipid Appearance and Stability	9/30/77	$68,560
5 K04 00068-03	Autor, Anne P. Iowa, U. of Iowa City, Iowa	Studies on Mechanism of Oxygen and Free Radical Toxicity	7/ 1/77	32,727
1 K04 00155-01	Erenberg, Allen P. Iowa, U. of Iowa City, Iowa	Thyroid Hormones and the Fetal and Neonatal Lung	9/ 1/77	36,886
5 K04 70558-05	Colten, Harvey R. Children's Hosp. Med. Ctr. Boston, Mass.	Mediators of Hypersensitivity: Genetic Aspects	1/ 1/77	25,000

Senator **Cranston**. That completes the questioning, Dr. Richmond. I appreciate very much your presence and thank you for your helpful answers. And I'm grateful to you for summarizing your statement, also.

We would appreciate your response for the record, except for that one which you won't have for a while, within 2 weeks. We will also have some written questions, and we'll give those to you tomorrow, if you could respond as quickly as possible.

[The following was subsequently supplied for the record:]

1. Q. Is there any information developed through SIDS research activities transferable to other areas of biomedical research investigation and are there other fields of biomedical research that SIDS investigators can look to for answers. How often and in what ways are such collaborative efforts undertaken?

A. The transfer of information resulting from both SIDS research activities and other areas of biomedical scientific investigation is a continuous interactive process. Each group is contributing to and learning from the research endeavors of the other group. For example, studies in progress are examining the normal maturation of respiratory and cardiac functions from birth to 4-6 months of age and comparing these results to those observed in near-miss infants. The bulk of normal physiological data obtained can be applied to the understanding of other conditions occurring in infants (i.e. ventilatory problems and heart rate adaptability). Similarly, the evaluation of 3 near-miss infants has led to the description of a new congenital syndrome. This syndrome involves simultaneous failure of control of ventilation and intestinal motility; it may be caused by a developmental abnormality in serotonergic neurons. At the same time, recordings of SIDS related physiological data have alerted researchers to an interesting phenomenon relating oxygen saturation and apnea pauses during sleep in a child shown later to have sickle cell problems. This finding was called to the attention of the Sickle Cell Branch, National Heart, Lung, and Blood Institute, to facilitate research efforts in another important biomedical field.

2. Q. (a) Is there any indication that subsequent siblings of a SIDS infant have a higher chance of suffering from this same problem?

(b) What does this suggest scientifically in terms of causation?

(i.e., A genetic tendency or environmental influence)

A. (a) From data available in the scientific literature, it would appear that sudden, unexplained infant death is not genetically controlled. Reviews of the reported cases of recurrence among subsequent siblings in more than 10 published series suggest that the somewhat enhanced risk subsequent siblings experience to be less than would be expected were it a Mendelian trait. Froggatt (Br J Prev Soc Med 25:119, 1971) reported that subsequent siblings of SIDS victims appeared to be at an increased risk estimated at 4 to 7 times that of the random chance. Using the higher figure the recurrence risk is about 2 percent.

(b) These findings, as well as studies of twin deaths and analysis of reported cases among siblings, indicate that risk is less than expected if a Mendelian inheritance were involved. At the same time, no specific cases have been reported in instances of parental consanguinity.* These observations as a whole suggest that similar environmental conditions may be acting upon infants who may be in similar stages of development.

*Blood relationship

3. Q: To what extent does biomedical research depend upon the findings of medical examiners in the field for leads to cause of death?

A: The systematic evaluation of autopsied infants will provide profiles of pathology common to SIDS victims and isolated findings relevant to specific categories primary or related to SIDS. A close interaction between researchers investigating the phenomena of SIDS and medical examiners is fundamental to any effort directed at developing and incorporating new ideas into SIDS studies.

4. Q: How close are we to finding a cause for SIDS, or at least being able to identify accurately potential SIDS infants?

A: Progress accomplished over the last three years has enhanced our ability to identify the syndrome and also ruled out one single mechanism as the cause for SIDS. Therefore, it is difficult to estimate with certainty the closeness to identifying all causes of SIDS. An organized research effort to identify risk factors for SIDS in newborn and young babies is in its infancy; it is estimated that a minimum of two years will be required to pinpoint them with any degree of accuracy.

5. Q: In your testimony, pages 2 and 3, you discuss the characteristics of the SIDS baby, mother, and their environments; will you provide precise frequency rates with which these characteristics occur?

A: The SIDS Baby:

Data in the scientific literature reveal several SIDS frequency rates depending on the variable. Precise frequency rates for each and all of them for the country as a whole do not exist. Albeit, the SIDS incidence rate approximates 2 per 1,000 live births, although lower and higher rates appear in the literature. A low of 0.31 per 1,000 live births has been reported from the Ashkelon District of Israel, while there is a rate of 0.51 per 1,000 live births for Chinese-Japanese-American infants in California. A SIDS rate for a three-year period (1970-1972) in Hawaii was reported to be 0.75 per 1,000 live births; the rate for part Hawaiians (sic) for this three-year period was computed at 1.4 per 1,000 live births compared to 0.13 per 1,000 live births for Japanese. In 1969, investigators at the Mayo Clinic reported an incidence rate of 1.2 per 1,000 live births, covering a twenty-year period. The population studied included both people from farming country and a middle-class urban community.

Rates in excess of 3 per 1,000 live births can be found when analyses of subgroups are performed. For example, a high of 5.93 per 1,000 live births has been reported for American Indians in California. Rates over 4 per 1,000 live births are frequently found for nonwhite groups. Data from Philadelphia, Pennsylvania showed the rate for nonwhite subjects to be 4.32 per 1,000 live births;

while data from Seattle, Washington showed a figure of 4.66 per 1,000 live births in the nonwhite population studied.

The age distribution of SIDS is impressive and considered to be the single most characteristic feature of the syndrome. The peak incidence is consistently found to be between the 2nd and 4th months of life as reported in more than 20 epidemiologic studies. It is estimated that during this period of infancy, crib death accounts for more than half of all postneonatal mortality. Comparatively few cases occur before one month, and the decline in incidence rate between 4 and 12 months is rapid. An occasional case is reported after 12 months of age.

More than 10 reports in the literature found that the syndrome consistently occurred more frequently in male babies than in female babies in a ratio of 3:2, and in nonwhite babies more often than in white babies (in some series by factors as large as 3 or 4 to 1). Many investigators feel that the reported differences in sex, race, and socioeconomic class are not specifically characteristic for SIDS, but actually reflect the epidemiology of infant mortality in general.

In one epidemiologic study involving five groups of census tracts, the incidence of SIDS was found to be 1.3/1000 live births in those census tracts where the median annual family income was greater than $13,500, but the incidence was 2.9/1000 where the annual median family income was less than $5,500.

Question 5 - Page 3

In another study, it/~~also~~ was also found that racial differences in SIDS rates disappeared within an economic subgrouping when rates were adjusted for family income. These findings suggested to the investigators that the observed racial differences are predominantly a reflection of a difference in socioeconomic state and not due to race per se.

Low-birth-weight infants appear to be at increased risk for SIDS. Several studies have reported a marked preponderance of infants with birth weights of less than 5.5 pounds (2,500 gm). In one study it was found that the incidence among infants weighing between 3.5 and 4.0 pounds (1,588 to 1,814 grams) at birth was approximately 13 per 1,000 live births. This is ten times greater than for infants weighing between 7.5 and 8.5 pounds (3,402 to 3,856 grams) at birth.

Another team of investigators found that rates for SIDS cases in their study ranged from 0.97 per 1,000 live births among babies who weighed between 3,501 and 4,000 grams (7.72 to 8.82 pounds) at birth to 6.55 per 1,000 live births in those babies who weighed between 1,500 to 2,000 grams (3.31 to 4.41 pounds) at birth.

Prematurely born infants are at increased risk for SIDS. It has been reported that the incidence rate for term infants of 39-weeks gestation is 1.01 per 1,000 live births; for infants of over 40-weeks gestation the rate approximates 1.88 per 1,000 live births. In contrast, the incidence rate for infants with gestational ages of 34 weeks is reported to be 27.5 per 1,000 live births. In another study, 30 percent of the SIDS sample were premature by birth as against 6.8 percent of total live births in Ontario Province, Canada.

Twins are considered to be at increased risk for SIDS. In one study devoted to twins only, 2.2 twins per 1,000 live births were affected in the same population in which overall incidence of twinning was 1.5 twins per 1,000 live births. In another study, the investigators presented incidence figures of 8.33 per 1,000 live births among triplets, 3.87 per 1,000 live births among twins, and 1.46 per 1,000 live births for random births. A number of instances have been reported in which both twins succumbed to the syndrome within a short period of time. It is not known if the relevant factor in these cases is low birth weight, shortened gestational age, state of maturation, zygosity, environment, or other variables. However, in a recently published study of twin deaths, it was noted that like-sexed and unliked-sexed pairs are equally affected, suggesting that environmental rather than genetic factors are more influential.

As recently as a decade ago, it was generally agreed that usually the infant who dies suddenly and inexplicably has been, in general, a healthy baby--not often ill--and well developed. Now there is a growing body of evidence to the contrary. A minimum of 30 recent reports in the literature reveals that a large percentage of infants dying from SIDS have had very minor illness of some type within two weeks of their death. Postnatal growth of these infants had generally been considered to be normal. However, several investigators have recently reported impaired postnatal growth of these infants as measured by gain in weight, crown-to-heel length, and head circumference from birth to demise. The SIDS victims also differed from controls in the following factors: the prevalence of blood type B was higher; there were more with low Apgar scores; they required more neonatal resuscitation, positive respiratory pressure, and oxygen; they exhibited more temperature regulation problems; there was a greater frequency of respiratory distress syndrome; they received more antibiotics; feeding problems were more common; gavage feedings were required more often; and neurologic abnormalities were observed more frequently.

The Mother of the SIDS Baby:

Several investigators have reported a higher incidence of crib death among babies born to mothers under 20 years of age. Fewer cases have been reported among first-born babies as compared with babies of subsequent birth order. From data in the literature, there is no evidence to suggest an increased risk with increasing parity.

Increased risk is reported when early maternal age (under 30) is found in combination with increased parity. It has also been found that mothers of SIDS cases are significantly younger than mothers of control cases. Other data show decreasing risk for SIDS with increasing maternal age. These investigators report a 2.57 SIDS rate per 1,000 live births for mothers less than 20 years of age. The rates are 1.88 per 1,000 live births for mothers between 20 and 24 years of age and 0.96 per 1,000 live births for mothers between 25 and 29 years of age. For mothers between 30 and 34 years of age the SIDS rate is 0.67 per 1,000 live births, and 0.61 per 1,000 live births for mothers between 35 and 39 years of age. A SIDS rate of 0.37 per 1,000 live births is reported for mothers over 40 years of age.

No significant differences have been found in prenatal exposure to x-rays in SIDS cases as compared with control cases. Several investigators have reported that the number of deaths among infants whose mothers had little or no prenatal care was significantly in excess of that expected on the basis of the distribution of live births. Mothers of SIDS victims also had more prior fetal losses, and were more likely to have had "flu" during their pregnancy. Maternal anemia, proteinuria, vaginitis, and puerperal infections have been reported to be more common during the SIDS gestation. The prevalence of cigarette smoking during pregnancy has also been reported to be greater among mothers of subsequent SIDS cases by several investigators.

Their Environments:

The frequency of occurrence of SIDS has been found to be consistently higher during the cold weather months as compared with the warm weather months as reported in 10 studies. This pattern has been demonstrated in both the northern and southern hemispheres. In the United States, the incidence is higher between November and March. For South Australia, the largest number of cases occur in July.

Question 5 - Page 7

No differences have been found in the SIDS incidence in the climatically dissimilar metropolitan communities of King County, Washington, and San Diego County, California. Clustering of cases has been observed in several studies. A higher incidence has been reported in urban areas as compared with rural areas.

From data ascertained about when the baby was last seen alive and the time of day when the body was discovered, it is well documented that infant sudden deaths occur most frequently at night, during the normal sleep periods. In one study it is reported that 74 percent of the cases were found between 6 a.m. and 12 noon (mostly between 7 and 9 a.m.) and 16 percent between 12 noon and 6 p.m. Data from a Czechoslovakian study are similar; 43 percent between midnight and 6 a.m. and 29 percent between 6 a.m. and 12 noon. In Northern Ireland, 48 percent of the cases were found dead between 12 midnight and 8 a.m., and 38 percent between 8 a.m. and 4 p.m. Some studies show that the greatest number of cases occur on weekends; other studies did not find this to be true.

6. Q: In your testimony on page 4 you state that one of the SIDS research objectives is "to elucidate the impact of a sudden and unexpected infant death on the parents, siblings and the extended family".

(a) Would a study of counseling techniques be within the scope of this objective?

(b) How much money is being allocated for this particular research objective?

A: (a) A study of counseling techniques would be considered pertinent to the NICHD SIDS emphasis area to elucidate the impact of a sudden and unexpected infant death on the parents, siblings and the extended family.

(b) In FY 1977 approximately $123,125 was spent on this area.

7. Q: On page 7 of your testimony, you state that the 1978 budget provides funds to support research to focus on the effects of infant death on parents and siblings with a beginning emphasis on the grief-guilt reaction.

(a) Could you tell us how much money is being alloted for this particular objective?

(b) What specific types of activities will be carried out under this research objective?

A: (a) In FY 1977 approximately $123,125 was spent on this area.

(b) This was for support of one subproject of a large biological and behavioral Major Research Program on SIDS. This project is concerned with the biopsychiatric consequences of a SIDS death on survivors, and the effectiveness of counseling intervention. The specific objectives of this project are: (1) to describe the psychological, social and biologic impact of SIDS death on family members, including siblings and a projection of how subsequent children might be influenced; (2) to define what is psychologically "unique" in the loss of a child from SIDS; and (3) to identify those coping mechanisms and resources in the environment which proved helpful or stressful and detrimental to the family.

8. Q: On page 7 of your testimony you discuss a broad research approach involving a variety of studies. Is this approach a new policy for NICHD or are these studies a part of research activities secondarily related to SIDS which was discussed earlier?

A: A broad research approach involving a variety of studies (e.g., brain maturation, sleep apnea, ventilatory response) has been an integral component of the NICHD SIDS research effort since its inception. The Institute recognized that the elucidation of the normal developmental biology of the human infant was essential to understand the phenomenon of SIDS. This approach has been rewarding in that it has led to a fuller appreciation of the impact of subtle developmental defects on infant survival and well-being, and the occurrence of SIDS. Research findings resulting from this eclectic effort have emphasized the importance of high risk pregnancy conditions as possible contributions to the occurrence of a SIDS event.

9. Q: How will data from autopsies, in the absence of more information on causation itself, enable you to identify high risk infants?

A: Autopsies have revealed certain pathological changes present in SIDS victims, but not in infants dying from other causes. These findings can be explained if the assumption is made that some physiological changes existed prior to death, (e.g., chronic hypoxia). It is this constant evaluation of autopsy data that will permit the development of new hypotheses and theories. These could be validated or refuted after searching for their evidence of clinical signs in infants at risk.

10. Q. You say in your testimony that SIDS incidence is higher in black babies than in white. What is the incidence of SIDS in Hispanic infants and children from deprived socioeconomic backgrounds?

A. The frequency of reports in the literature regarding SIDS incidence by various and specific racial and socioeconomic groups varies in scope, depth, content and populations studied. At the same time, because race and socioeconomic status are strongly correlated, it is very difficult to separate clearly and distinctly the racial from the socioeconomic contribution to risk.

The following published data on incidence of SIDS among Hispanic infants is derived from a report by Kraus and Borhani (Am. J. Epidemiol. 95:497, 1972).

Race	Incidence/per 1000 live births
Oriental (Chinese and Japanese Americans)	0.51
White (other than Mexican American)	1.32
Mexican American	1.74
Black	2.92
American Indian	5.93

Case-control studies, as, for example, the data from the Collaborative Perinatal Project (Naeye, et al, Am. J. Dis. Child. 130:1207, 1976), suggest low socioeconomic status is associated with excess risk for SIDS; but data showing incidence of SIDS by socioeconomic status are rare. When Kraus and Borhani categorized all Californians into unemployed + nonfarm laborers versus professional, technical, or managerial persons, the incidence of SIDS was found to be higher in the unemployed + nonfarm laborer group. Moreover, SIDS rates varied from 4.31 per 1,000 live births when the father's occupation was "unemployed" to about 0.73 per 1,000 live births when the father's occupation was "technical, managerial, or professional."

SUDDEN INFANT DEATH SYNDROME

Senator Cranston - Inserts for the Record
Hearings, March, 1978

Question No. 1

In project areas with a large non-English speaking population, do Federally funded projects employ bi-lingual counselors?

Answer

Yes, and there are a number of ways in which this can be accomplished. If there is sufficient need for a permanent staff member with this skill, either full time or part time, then such a person can be hired as part of the project staff. More often, bi-lingual capability is not routinely required and the project may identify someone who can be obtained on a consultant or contract basis for a period of time. Sometimes a liaison person from another BCHS project can serve as a bi-lingual counselor to the SIDS program.

In addition to counseling SIDS families, bi-lingual skills have been useful in the program to: 1) translate the most popular SIDS publication, Facts into Spanish, 2) translate a variety of SIDS publication used in the New Jersey project into Spanish, and 3) to translate materials used in the New Mexico project into the local Indian dialect.

Sudden Infant Death Syndrome
Senator Cranston - Inserts for the Record
Hearings, March, 1978

Question No. 3

Do you think the provisions which have been added to the legislation authorizing support for community health centers, migrant health projects and community mental health centers which require such centers to have staff who can communicate with non-English speaking patients and who can bridge the cultural gaps related to health which may exist between staff and patients should also be applied to SIDS information and counseling projects?

Answer

No, SIDS deaths in many communities are so few, especially to the non-English speaking population, that such a requirement would have little significance. Further, as has been shown in the answer to the previous question regarding by-lingual counselors, SIDS projects have developed the capability to flexibly respond to the needs of the non-English speaking populations who may reside in their service area.

SIDS - Senator Cranston - Inserts for the Record - Hearings, March 1, 1978

Question No. 4a

What are the rates of infant autopsies in the federally funded SIDS project area? What steps are or will be taken to increase these rates?

Ans. It should be noted that the National Center for Vital Statistics reports a national infant autopsy rate of 46.7% in 1975. The present range of infant autopsy rates in the SIDS Information and Counseling project areas for 1976 is from 52% to 100%, with 24 project areas reporting that 80% or more of the infants who die are autopsied.

Infant Autopsy Rate in SIDS
Information and Counseling Project Areas
1976 Data as Reported by Projects

SIDS Projects	% Infants Autopsied
National Average	46.7%
Alabama	80
Arkansas	52
California	98
Colorado	82
Connecticut	96
Florida	92
Illinois	
Loyola	100
State	85
Iowa	100
Maryland	86
Massachusetts	67
Michigan	100
Minnesota	61
Missouri	61
New Hampshire	100
New Jersey	93
New Mexico	100
New York	
N.Y. City	100
Genesis	100
New York	100
North Carolina	100
Ohio	93
Pennsylvania	100
Rhode Island	100
Texas (Houston)	96
Utah	95
Vermont	100
Washington	
Seattle	72
Spokane	100

The percent of infant deaths autopsied in SIDS project areas as given in the response to question 4a is based on the number of infants who died under sudden, unexpected or unidentified circumstances. In those areas where there are Federally funded SIDS activities such sudden and unexplained deaths are referred to the SIDS projects. Autopsies are performed on the portion of these unexplained deaths where SIDS is the probable or suggested cause. Thus, these ratios represent a percentage of deaths under unidentified circumstances and not a percentage of all infant deaths in the State.

Infants who die from known causes are generally not autopsied.

Question No. 4 b
Provide for the record, data on the autopsy rates in States without SIDS Information and Counseling projects.

Ans. This information has been requested from the National Center for Health Statistics. They report that this data is available on the data tapes.

See attachment.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
OFFICE OF HEALTH POLICY, RESEARCH, AND STATISTICS
HYATTSVILLE, MARYLAND [illegible]

March 9, 1978

NATIONAL CENTER FOR
HEALTH STATISTICS

Ms. Geraldine Norris
Director, SIDS Program
Office of Maternal and Child Health
Health Services Administration
5600 Fishers Lane, Room 7-15
Rockville, Maryland 20857

Dear Gerry,

This is to confirm my conversations with you and Carol Armstrong concerning the availability of autopsy rates for infants deaths and SIDS deaths by State. We do have information on the autopsy rates for infant deaths for the nation for the years 1972 through 1975. The following figures show these rates:

1975	46.7
1974	46.6
1973	45.4
1972	44.1

Prior to 1972, this data was coded but not tabulated.

We have no existing tabulations which show autopsy rates for infant deaths and SIDS deaths by State. However, this information would be available from our public use data tapes which are described in the enclosure. In fact, as you will note on page 11, these tapes would permit one to tabulate SIDS deaths for counties. The tapes can be purchased.

If we were to prepare a special tabulation for you, we would first request that you ask for a cost estimate. Currently, special tabulations take about four weeks.

If you have further questions, please feel free to call me.

Sincerely yours,

Drusilla Burnham
Statistician
Mortality Statistics Branch
Division of Vital Statictics

Enclosure

SIDS - Senator Cranstor - Inserts for the Record - Hearings, Mar. 1, 1978

Question No 5

In your testimony (page 9) you discuss two public service telecasts which were distributed to 300 major television stations in September of last year. Do you have any plans for redistribution of revival of these announcements?

Answer

We are currently developing plans to redistribute these out-takes of SIDS films as public service announcements. This will most likely be done under contract with the distribution handled and controlled by the contractor. Because of the nature of this work, certain private for-profit firms have in the past been found to be well qualified to undertake such projects.

Senator Cranston - Inserts for the Record
Hearings, March 1978

Question No. 6

You discuss twenty publications which you produced on SIDS. Are these available free of charge to either Federally-funded projects or the parent organizations?

Answer

All of the publications produced by the SIDS program are widely distributed not only to the projects and parent organizations, but also to health professionals, public safety officials and others. Specific materials are furnished to the groups for whom the information is directed. For example, the publication Death Investigation: An Analysis of Laws and Policies of the United States, Each State and Jurisdiction, was sent to State coroners and medical examiners, Bureaus of Vital Statistics, Attorneys General, legislative contacts, health officers, hospital and medical associations, law schools, university based programs, professional societies and committees, as well as to the voluntary groups and Federal projects. Examination of the Sudden Infant Death Syndrome Infant: Immunization and Autopsy Protocols is distributed to medical examiners and pathologists as well as to projects and national organizations. We have printed 10,000 copies of that publication. After Our Baby Died is used by medical and nursing students, medical social workers, emergency room personnel and other health professionals. The student handbook has had 125,000 copies printed. Facts About Sudden Infant Death is the most popular pamphlet for the general public with 170,000 copies printed in the last 3 years. It has been revised once and also translated into Spanish. Most are distributed through the information and counseling projects.

All SIDS publications and films are available free of charge (for publications) or on free loan (for films) to Federally-funded projects, parent organizations or other groups and individuals.

If substantial numbers of a publication or publications are requested, for example 5,000 to 10,000 copies, by any one organization we may have to review our policy in such cases.

The police training film "A Call for Help" has highly sensitive materials (scenes of dead infants that are to assist police in understanding the difficulties in distinguishing child abuse from SIDS). It has been distributed at no cost to the projects and certain organizations and groups who work regularly in police training but its general distribution is controlled by the International Association of Chiefs of Police.

SIDS - Senator Cranston - Inserts for the Record - Hearings, Mar. 1, 1978

Question No. 7

On pages 10 and 11 of your testimony you cite five on-going contracts which were developed by the Bureau of Community Health Services under the authority of P.L. 93-270. Could you please provide for the record information on the name of the contractors, as well as details relating to the cost, scope and due date of these projects?

Answer

Not all contracts referred to in our testimony are currently on-going. One previously mentioned, a recently completed review and analysis of State statutes, resulted in a successfully received publication "Death Investigation: An Analysis of Laws and Policies of the United States, Each State and Jurisdiction."

We are enclosing summaries which specifically address your questions on our five on-going contracts. These contracts are funded using 1978 appropriations.

Sudden Infant Death Syndrome Contracts and Purchase Orders

Brief Descriptions

Fiscal Year 1978

1. **Title:** Mobilization of Community Resources for Sudden Infant Death Syndrome (SIDS) Program Through Information and Educational Activities in Areas Not Served by Federally Funded SIDS Projects

   Contractor: National Sudden Infant Death Syndrome Foundation, Inc. (Abraham Bergman, M.D.)

   Cost: $90,000

   Project Period: October 1977 - September 22, 1978

   Description: Fiscal year 1978 continuation of this contract completes a two-year effort in 18 States not currently served by federally funded SIDS projects. The purpose is to mobilize State and community resources as well as to assist them to develop and implement SIDS Programs with or idependent of Federal support.

   Expected Outcomes: This contract is expected to provide current information about SIDS activities in States; to stimulate applications for Federal SIDS grant funds or to stimulate areas to develop SIDS projects independent of Federal funds; to develop a prototype for guidance and use in areas where SIDS Programs still need to be developed.

2. **Title:** Toxicological Analysis in Cases of Suspected Sudden Infant Death Syndrome (SIDS)

   Contractor: University of Utah, Center for Human Toxicology (Brian Finkle, Ph.D.)

   Cost: $73,184

   Project Period: October 1977 - June 30, 1978

   Description: Fiscal year 1978 continuation of this contract completes a two-year effort to develop feasible methods conducting toxicological analysis in instances of infant deaths and to determine if or under what circumstances it is advisable to conduct toxicological studies in infants.

Page 2

Expected Outcomes: This contract is expected to determine if drugs, metabolites, and other agents to which infants may be exposed may adversely affect, aggrevate or precipitate a physiological crisis in infants otherwise predisposed to SIDS. They will develop and test rational laboratory methods of toxicological analysis suitable for body tissues and fluids from infants. Their findings will be reported in a final project report which will include a laboratory manual suitable for inclusion in an extended autopsy protocol guidance manual.

3. Title: Evaluate the Impact and Effectiveness of the National SIDS Information and Counseling Grant Program

   Contractor: Provided Phase I is completed satisfactorily, the intent is to continue to contract with Lawrence Johnson and Associates, Inc. (Frederick S. Stinson, Ph.D.)

   Cost: $100,000

   Project Period: May 1978 - April 1979

   Description: Fiscal year 1978 continuation of this contract is to implement the evaluation methodology which was specifically designed to comprehensively assess the extent to which the SIDS Information and Counseling Projects are achieving the program objectives.

4. Title: Distribution of Police Training Film Entitled A Call For Help

   Contractor: International Association of Chiefs of Police, Inc. (Blair D. Schneider)

   Cost: $15,000

   Project Period: April 1978 - March 31, 1979

   Description: Fiscal year 1978 continuation of this contract is to promote, distribute and maintain in good repair this police training film.

   Expected Outcomes: Because of the nature of this film, its distribution must be controlled. During the first year it was continually overbooked. Its reception by police and emergency care providers has been exceptionally good and it is anticipated that second year bookings will be as steady as the first six months of this contract. During the six months of the contract, the film was booked for 459 requests in 51 States with a substantial "back-log" of bookings remaining. Thus far this is the best and most universal educational production for these groups. Its use to educate is enhanced by the discussion it precipitates which should result in emergency responders becoming more sensitive to families who are in the immediate crisis situation of having lost an infant suddenly and unexpectedly.

5. Title: Grant application objective reviewers panel

Purchase Order: Experts in the areas of SIDS and public health delivery of services

Cost: $7,500

Project Period: April 1, 1978 - June 30, 1978

Description: In accordance with DHEW departmental policy for an objective review process by which grant applications are assessed for merit, readers are engaged to conduct comprehensive reviews of each application and to make appropriate recommendations for approval or disapproval. They are allowed several working days for independent work then they are convened as an ad hoc work group.

SIDS - Senator Cranston - Inserts for the Record - Hearings, Mar. 1, 1978

Question No. 8

Regarding these same contracts, why is the toxicology contract funded through the SIDS act authority rather than NICHD? In other words, wouldn't a toxicology study be more in line with research rather than service activities?

Answer

The toxicology study funded under the SIDS information and counseling authority was the result of discussion at the National Conference of State Pathologists in 1975. The study was submitted for the review of the interagency panel on SIDS before it was awarded as a contract.

The interagency panel including representatives from NICHD, NIMH, NCHS and NINCDS argeed that the project was worthwhile and that the project did not constitute basic research. The project is esentially an exploratory study to determine if toxicology studies should be made a part of autopsy protocols and, if so, to develop a protocol appropriate for the general type of medical examination.

The study was let under the SIDS information and counseling authority since the end objective, to improve autopsy findings in suspected SIDS deaths, was closely related to the activities and objectives of the SIDS authority. A report of this study is due by the end of this summer.

SIDS - Senator Cranston - Inserts for the Record - Hearings, Mar. 1, 1978

Question No. 9

Could you explain in a bit more detail the contract for mobilization of resources in communities not presently served by a project?

Answer

The purpose of this contract is to assist the Office for Maternal and Child Health (MCH) in the implementation of a nationwide program to provide scientifically sound, appropriate and compassionate services to families who have lost an infant suddenly.

It is a 24 month effort and includes specific plans for project activity, methodology and time schedules for all activities through September 30, 1978.

Workshops with Regional Office SIDS assignees, State and State MCH representatives and other interested parties are held to discuss and review plans and accomplishments.

Various reports are required, one containing assessment of SIDS activities, recommendations for addressing needs and future plans of each visit to States is submitted to State MCH program directors, HEW Regional Office SIDS assignees and other appropriate officials and organizations.

Also a quarterly report containing information about contract activities in the agreed priority States is requested and includes:
- A quantative and qualitative description of progress
- Problems which may impede performance of the contract
- Personnel and person days used
- Discussion and plans for work to be performed
- Funds expended during reporting period and forcast of expenditures for coming quarter

This report additionally requires data on:
- Performance of autopsies on infants who suddenly and unexpectedly die
- Report of autopsy findings to families within 72-hour period after death. Appropriate use of SIDS as the cause of death on the infants death certificate in accordance to proper classification and guidelines.

306 2

- Information dissemination and counseling by knowledgeable health professionals about the causes of death and explaining grief reactions
- Voluntary referral to self-help groups if they are existing

These quarterly reports through July 1978 are used to evaluate the effectiveness of this contract in implementing coordinated SIDS service programs in these areas.

Prior to termination of the contract year a final report is to be submitted describing all activities and accomplishments for each State served; problems which hindered activities; cost and effectiveness report; conclusions and recommendations for organizing, initiating, and implementing further SIDS programs and an executive summary including a definition of current SIDS problems, methodology, conclusions and recommendations.

Priority Listing of States Without SIDS Federal Funds
Based on FY 76 National Center for Health Statistics Information
(List Revised February 10, 1978)

State	Estimated SIDS/Year	State	Estimated SIDS/Year
Indiana	160	Oregon	71
Georgia	160	Kansas	62
Louisiana	138	Nebraska	48
Virginia	134	Idaho	33
Wisconsin	130	Hawaii	32
South Carolina	93	Maine	29
Mississippi	84	Nevada	19
Oklahoma	84	Alaska	16
Arizona	80	Wyoming	13

This contract is being performed by the National Sudden Infant Death Syndrome Foundation, Inc. The current funding is $90,000.

The contract has not been canceled. The scope of work of the contract will be performed through September 22, 1978. At that time the continued need for the project work scope will be reviewed together with other contracting priorities and policies and a decision will be made on whether or not another contract with a similar work scope will be supported.

SIDS - Senator Cranston - Inserts for the Record - Hearings, Mar. 1 1978

Question No. 10

The National Sudden Infant Death Syndrome Foundation carried out a survey of the activities of the Federally-funded projects throughout the United States. Please provide detailed comments on the results of this study. (Copy of study attached.)

Answer.

The SIDS program representatives have not yet reviewed in detail the survey findings of the National Sudden Infant Death Syndrome Foundation. The survey findings relative to the States in which there are Federally-funded SIDS activities will be carefully reviewed and detailed comments provided to the Subcommittee. At the present time several Federally-funded SIDS projects are being site visited and reviewed by the BCHS/SIDS program representatives. The knowledge gained from these reviews will be compared to the survey findings of the Foundation as part of the review of the survey and as part of the Bureau's continuing evaluation function relative to all Federally-funded SIDS projects and activities.

Question No. 10b

When will the results be ready?

Answer

The BCHS response to the survey findings of the National Sudden Infant Death Syndrome Foundation will be prepared and available within four weeks (by May 1, 1978).

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
1. Alabama	115	Federally funded grant project serving Mobile, and eight counties in South West Alabama. Project generally provides good services to families in area served. Has provided some educational outreach into other areas of the state. Very few services exist for families in other areas of state. NSIDSF Contract Work initiated a program in Jefferson County (Birmingham) in the Northern part of the state. Area will need more assistance for continuation, and potential expansion. There is expressed interest for this program on the part of the new State Director for MCH.	Agree with NSIDSF comments
2. Alaska	16	No Federal Project Funds. Through the efforts of committed individuals in the State Health Department and from the Anchorage community (with assistance from NSIDSF Contract Work), full services for families have been implemented and maintained in the greater Anchorage area, and extended to other population centers of the State. Most of State Population area covered.	Full complement of services are not available throughout the State. The State Health Dept. (MCH)(Maternal and Child Health Care) and voluntary community do provide partial services in Anchorage where 50 percent of the State's population resides. No Federal support requested.
3. American Samoa	data not reliable	None	No comprehensive SIDS services available. No Federal support requested. May be best to integrate the SIDS project into the MCH (Title V) program from the start.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
4. Arizona	80	No Federal Project Funds. NSIDSF Contract Work has assisted with setting up full services for families in Maricopa County (Phoenix). Approximately half of the state's population resides in this area. Early contract work established full services for families in the Tucson area, which continue on a reasonably good, but inconsistent basis. Approximately one quarter of the State's population receive little, if any, assistance.	No Federal support from SIDS program. Partial services are available on a voluntary basis.
5. Arkansas	66	Sate Wide Federally Funded Project. Program appears to be providing services to families. NSIDSF has little intercommunication with this Project although repeated attempts have been made.	Federal SIDS support provides for comprehensive services statewide.
6. California	662	State Wide Federally Funded Project. Original project design was excellent on paper. Problems have existed because of size of state, state population and staffing limitations. Primary emphasis has been on educational outreach activity. Full services to families are inconsistent throughout State. They are seen as very good in Los Angeles County, San Diego County, San Mateo County, Alameda County, Marin County, and Yolo County. There are other Counties with good, but sometimes inconsistent services for SIDS Families. The majority of the good service programs and their success is attributed to the agencies and community groups in those areas. For example, Los Angeles County established a full service program for SIDS prior to PL93-270. Much of the rest of the population of the State continues to receive limited assistance.	Federal SIDS support provides for a Statewide program. A computerized data collection system has been in place for several years. The State also has a well-oriented coroner and medical examiner death investigation system and as a result there is virtually a 100% autopsy rate on all infants who die suddenly and unexpectedly. The project is methodically preparing each local health Department to carry-out their responsibilities to the SIDS families as defined by the California State SIDS legislation.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
7. Colorado	82	State Wide Federally Funded Project. Full services for families has been implemented in four counties in the Denver area. Management of families in that area is seen as very good. Project subsidizes autopsies. Thirty-eight Regional Coordinators have been trained to counsel families and establish management standards statewide. Difficulties appear in identification of SIDS infants, and reporting. Currently only one-fourth of the State receives full services for families.	Federal SIDS support provides for Statewide services. The project has conducted activities to systematically implement a comprehensive program. In 1977, there were 102 SIDS cases reported and 84% were autopsied. Families losing infants to causes other than SIDS also are offered services. Data collection and program evaluation systems also have been implemented. There has been active voluntary and official agency involvement. The project provides autopsy funds only in instances where local county funds are not available.
8. Connecticut	69	State Wide Federally Funded Project. Very good services for families have been established statewide. Educational outreach activity established, and good cooperative efforts seen between Project and Voluntary groups.	(Argument with NSIDSF comments.) This is a well-organized statewide project that has received Federal SIDS supoort for three years. There is an integrated system for case identification, coordinated counseling and follow-up, and data collection.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
9. Delaware	16	No Federally Funded Project. Services for families are inconsistent, sporadic. MCH Director is interested in program, including more structured programmatical assistance.	No Federal SIDS support. Have participated in training workshops conducted by the Pennsylvania SIDS project. * No Federal support has been requested. *Services are available through the State Health Department, however, they are not comprehensive and not consistent.
10. District of Columbia	37	No Federal Project Funds. SIDS cases are autopsied and referred for follow-up services to one individual. Services are inconsistent. Educational activity was initiated with NSIDSF Contract work. This is an area with special problems. Will probably need grant support or financial funding to coordinate a good, full service program with adequate training and staffing.	No Federal SIDS support. Agree with NSIDSF statements. Consultation has been provided by the SIDS program office. The community does intend to apply for a SIDS information and counseling grant in 1979.
11. Florida	209	State Wide Federally Funded Project. Services for families provided statewide. Judged as an excellent program. Very real commitment on part of project personnel. Target areas established, parent-to-parent programs initiated, public health nurses trained, good communication with others, good utilization of community resources. A mechanism for assisting families has been established that would suffer without funds, but could continue in part.	Agree with NSIDSF statement.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
12. Georgia	160	No Federal Project Funds. Services for families established for Metro Atlanta area through NSIDSF Contract. Educational activity expanding into other areas. Services for families also exist in Augusta, (Southeast) established by voluntary local group. Excellent cooperation from State Health Department. Coroners have local jurisdiction, many do not make referrals. For this reason, a statewide program will require efforts county by county in other areas of the state.	No Federal SIDS support requested.
13. Guam	data not available	No NSIDSF statement.	No Federal SIDS support. May be best to integrate the SIDS project into the MCH (Title V) program from the start.
14. Hawaii	32	No Federal Project Funds. Individuals from the University of Hawaii, Children's Hospital, Diamondhead Mental Health Center, other agencies and community members are implementing full services for families on the Island of Oahu. Support and assistance was supplied via NSIDSF Contract. The program will expand to the outer islands by January 1, 1979. This represents a dramatic change in SIDS management there in less than one year.	In a grant application submitted by Kapiloani-Children's Medical Center they report "there is no organized effort towards the management of SIDS in Hawaii." Standardized autopsies on infants who die suddenly and unexpectedly are not routinely done. They are optional at the discretion of the coroner or medical examiner. The ICDA code for SIDS (795) is still not appropriately used on Death Certificates. A chapter of NSIDSF was organized in September 1977. There are three SIDS related research projects being conducted in this State.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS*	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
			Unfortunately, the submitted application from Hawaii was not recommended for approval by the project reviewers and, in fact, was not eligible for funding since the applicant had requested support to commence July 1, 1979. They are encouraged to reapply in fiscal year 1979.
15. Idaho	33	Ten Counties of Northern Idaho Served by Spokane Project. Some educational activity has taken place but services to families are limited, and inconsistent. Southern Idaho. Boise--Coroner interested, and cooperative. Autopsies done and information to families provided. Assistance in training and maintenance of service giving agencies needed. Idaho Falls. Some services to families provided on an inconsistent basis.	As of July 1, 1978, there are no Federal SIDS funds supporting the SIDS activities in this State. No request for funds has been received, however, consultation is being provided and they are encouraged to seek support in order to initiate a SIDS program.
16. Illinois	335	Two Federally Funded Project Covering Total State. Loyola Project. Serves nine northeastern counties. Includes the Greater Chicago area, and Lake County, Indiana. Covers approximately two-thirds of population of Illinois. Very good services to families provided with good integration of other agencies. Education outreach, and cooperative efforts.	Agree with NSIDSF comments, however, the newly enacted law that requires autopsies for all cases of unexpected infant deaths will improve the entire State system since case identification will be more reliable and consistent.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
		Springfield Project. Serves remainder of Illinois Counties. Geography, and local coroner jurisdiction remains handicap for good services to families. Some educational outreach activity. Full services for families provided in Champaign-Urbana area, and some other urban areas. Services statewide are sporadic, and inconsistent.	
17. Indiana	160	No Federal Project Funds. Exception, Lake County, Indiana. Sporadic, inconsistent services there. Major community interest gaining. Full services should be forthcoming by summer. State Health Department interest for Statewide program becoming evident. NSIDSF Contract work and voluntary group activity in coordination with Health Department currently underway. Services for families inconsistent with frequently non-existent at this point.	Indiana is considered a high priority State as it is one of two States with an estimated SIDS incidence over 150 that has not availed itself of Federal support for a SIDS program. Only recently have they begun to initiate activites on behalf of families who have lost infants to SIDS. A grant application for an educational program consisting of 7 one-day conferences on SIDS was recently reviewed by the SIDS peer review group. Because it did not provide for the comprehensive and coordinated services required by the SIDS legislation and regulations (death investigation including autopsy on possible SIDS infants, use of SIDS on death certificates, prompt notification of families and counseling services) grant support was not possible.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
18. Iowa	82	Federally Funded State Wide Project. Activity has been primarily directed at educational outreach and community level training programs. Full services for families are currently operable for approximately one-fifth of the population because of Medical Examiner cooperation and voluntary agencies. Better cooperation in obtaining autopsies, certification, reporting, and coordinating services seen as necessary. Legislation that would provide state funding for autopsies, and full SIDS management standards currently pending.	Consultation will be provided and the State will be encouraged to reapply in 1979. The SIDS Information and Counseling Project provides coordinated statewide services. Medical examiners in each respective county are the primary source of referral.* This is a well-organized program with strong counseling, follow-up activities as well as educational and informational programs. *The recently enacted SIDS State legislation does require that autopsies be conducted on all children under 2 years of age who die suddenly and unexpectedly and the State bears the cost for the autopsies.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS*	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
19. Kansas	67	No Federal Project Funds. Educational outreach activity with emphasis on management standards has occurred via NSIDSF Contract activity and voluntary groups in the more populated areas. Currently, one-half of the state's population has excellent services for families in such areas as Greater Kansas City, Topeka, and Wichita. Nucleus groups have been from the State Health Department. The success of further efforts in Kansas is ensured by a State Health Director who believes in community-oriented programs and working twoards that end.	No Federal SIDS support has been requested. Services are fragmented and irregular. Consultation has been provided and they will be encouraged to apply in 1979.
20. Kentucky	113	Newly Funded Federal Project, State Wide. Previous NSIDSF Contract Work and a committed state agency should ensure good full services to families.	Kentucky was awarded funds on 1/1/78 for a statewide SIDS project. There is an active Health Department in every district. Of the 49 recorded SIDS deaths in '76 only 50% had autopsies. There presently is poor recording and reporting of infant deaths. Consultation will be available to establish a more effective program. The program has developed an educational and informational program which is being initiated this year.
21. Louisiana	138	No Current Federal Project Funds. Project in New Orleans area discontinued after two years because of ineffectiveness. Full services to families established prior to PL93-270 that were disrupted by Project. Services currently being reestablished by local voluntary group, and NSIDSF Contract Work.	No Federal SIDS support at this time. State Health Department has had changes in staff and as a result the program support has been unstable. The State has not requested Federal SIDS support.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
		State Public Health Department is interested, and has promised to help towards a statewide program as mandated by a state law passed in 1975.	
22. Maine	29	No Federal Project Funds. Autopsies generally done. Full services for families are inconsistent. Informational counseling for families being implemented currently by State Health Department, with a coordinator appointed by the State MCH Director. Training for service providers and related agencies will be required. Efforts addressed towards community programs. NSIDSF Contract Work is assisting.	Agree with NSIDSF. In May, 1977 two regional SIDS training seminars were conducted for health professionals, emergency personnel and the voluntary community. These were supported in part by the Federally supported contract with the NSIDSF. Maine has not requested Federal support.
23. Maryland	91	Federal Project Serving 90% of State Population. Effective and cooperative State Wide Medical Examiner's System. Full services to families judged as very good in areas that Project serves. Good educational outreach.	Agree with NSIDSF except that the project now provides statewide coverage. The educational activities are a particular strength of this project.
24. Massachusetts	137	Federally Funded Project. Project currently covers Eastern Massachusetts, Autopsies generally done and full services to families seen as very good in this area. Educational outreach being done, Western Massachusetts (west of Worchester) has inconsistent and sometimes non-existent services for families. State Bureau of Vital Statistics reports almost no SIDS incidence in Western Massachusetts which probably reflects on the certification of cases. Massachusetts has multiple, autonomous Medical Examiners systems and health departments. Full	This project now provides statewide services. This is an effective and well established system for providing immediate and continuing services to SIDS families. A well-formulated and carefully documented methodology for the training of Public Health nurses in grief counseling has been developed.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
		services for families will require extensive coordination and time. Some educational activity done under NSIDSF Contract in early 1977.	
25. Michigan	260	Federal Project Funds. Excellent, full services for families occur in Wayne County (Detroit) where Project is located and has primary responsiblity. Efforts being made to extend into other areas of the State. Good interest on part of State Health Department in the past with training programs for service providers. Some of this activity continues across the State but in inconsistent patterns. Full services occur in Grand Rapids through assistance of local voluntary group. The four western counties of the Upper Peninsula are being served by health professionals in Green Bay, Wisc. A state law passed in 1974 providing autopsy funding is currently being revised to be more effective. Project personnel working with local groups effectively to coordinate activity and programs.	This now is a SIDS program which provides statewide services. They have extended their counseling services to families whose infants died suddenly or unexpectedly regardless of cause. The State Health Department is supportive of the program, but staff shortages deter their full participation.
26. Minnesota	113	State Wide Federally Funded Project. Very good full services provided to families, particularly in the Minneapolis/St. Paul area. Good educational outreach activity. Some inconsistency of services to families in lesser populated areas of the State.	The Minnesota project is currently implementing a statewide program. Marked improvement has been made in their educational programs and in the appropriate use of SIDS on death certificates. A system for case identification and referral to counseling resources is well organized and efficient.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
27. Mississippi	84	No Federal Project Funds. With the exception of Jackson, Mississippi area, SIDS is not routinely used on death certificates and autopsies are not routinely performed. Lack of knowledge and/or cooperation of many Coroners in this State has been the assigned reason that interested health professionals lose impetus in programs for SIDS families. Mississippi has an excellent program for high risk infants but do not include SIDS in this activity. Lack of funding has made SIDS appear to be a low priority within the State Health Department along with difficulties in identification and reporting of cases. There has been limited interest in the past in requesting funds for programs. Some educational outreach activity has taken place. Will require a concerted effort, and a county by county educational outreach to change the current management of SIDS in this State. There is some interest within the Health Department that will hopefully change this in the current year.	State has not requested Federal support for a SIDS program. Consultation is being provided through contract with NSIDSF and State is encouraged to apply in 1979.
28. Missouri	141	Federally Funded Project in Greater St. Louis Area. This Project serves the five counties comprising Greater St. Louis. Full services for families are excellent in St. Louis City and County, where the full cooperation of the Medical Examiner exists. There are no consistent services in counties outside that area because of inconsistent autopsies, certification and referrals. Good educational outreach activity by Project with good integration with existing agencies. Good services for families exist in the three counties encompassing Kansas City, Missouri. These were	The Federal SIDS grant to Missouri now provides for statewide services in collaboration with the State Department of Health. In addition, the recent passage of State legislation requiring autopsies and counseling services will enhance the program.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
		implemented under NSIDSF Contract Work, local voluntary groups and the excellent cooperation and support of involved county officials. Under NSIDSF Contract Work, a Missouri SIDS Committee has been formed representing State Health officials, parents, health professionals, community and state leaders who are utilizing legislative efforts as the primary tool for effecting good services for families in the rest of the State. That legislation is currently pending. One half of the total population of Missouri has adequate services for SIDS families.	
29. Montana	24	Eight Counties of Western Montana served by Spokane Federally Funded Project. Good services for families are generally inconsistent although autopsies are routinely done. Some educational activity. Local involvement is gaining momentum in working towards full services for SIDS families. In general, Montana has sporadic, inconsistent services for SIDS families.	As of July 1, 1978, there is no Federal SIDS support for Montana. Consultation will be available and they have been encouraged to apply in 1979.
30. Nebraska	48	Two Federally funded projects were in effect in the first funding year (1975-76). During that time, 68 cases were reported with an autopsy rate on 74% of the potential SIDS population. Funding was terminated from both programs after one year. In 1977, only 22 SIDS cases were reported for the State with 20 of those from Douglas County (Omaha) where activity was continued under the NSIDSF Contract. Some private funding has been obtained through the NSIDSF to enable statewide training programs for counselors for Sids families. Services for families currently exist	A grant proposal for a statewide SIDS program from the Nebraska State Department of Health was reviewed and recommended for approval during the current review cycle. It is anticipated that funds will be available within the next few weeks to award the grant and initiate a comprehensive SIDS program.

*Based on national average of two SIDS per 1,000 live births.

State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
		in the four major counties of Nebraska which includes approximately one half of the State population. Very few services exist in the rest of the State at this time. Currently, legislation which would facilitate a statewide program is pending. The bill has statewide support and no apparent opposition.	
31. Nevada	19	No Federal Project Funds. Excellent full services for families are rendered to families in Clark County (Las Vegas) where approximately two thirds of the state population resides. Good services are also provided to families in Washoe County (Reno), which means almost 95% of the population is provided for. This was facilitated through NSIDSF Contract Work and the commitment of key individuals within the local agencies.	While the Federal SIDS office has received inquiries from the State of Nevada, no request for grant support have been made. The State reports that services are fragmented and sporatic.
32. New Hampshire	22	State Wide Federally Funded Project. Good services for families provided for the past two year. State also has legislation providing for SIDS Management Program that is considered model legislation.	Agree with NSIDSF comments. State enforced autopsy laws in all infants who die suddenly and unexpectedly have enabled this project to reach an autopsy rate exceeding 90%.
33. New Jersey	175	State Wide Federally Funded Project. Project is providing good services to families on a statewide basis and excellent services in the northern part of the State. Good integration with other agencies and good educational outreach.	Agree with NSIDSF comments.

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State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
34. New Mexico	44	State Wide Federally Funded Project. Full services provided for families by this Project that have been considered superior and comprehensive. The individuals involved are committed and serve the entire state well.	Agree with NSIDSF comments. This is a model rural statewide project with a well-organized and functioning Medical Examiner death investigation system, strong Information and Counseling programs, referral and follow-up activites and active community participation.
35. New York	471	Three Federally Funded Projects Serving Parts of New York. New York City Project. Provides excellent services to families under difficult circumstances. Long Island Project. Provides excellent services to families. Genessee Valley Project (Rochester). Provides excellent services to families. All projects appear to be doing good educational outreach in communities served. Portions of New York State are not served by Federally funded projects. Services for families are sporadic and inconsistent. Some services are provided in the Albany area with voluntary and health professional involvement. Difficulties with referrals and case identification. Educational outreach done in Albany, Binghamton and Buffalo. More effort needed here.	NYC - This project provides effective Information and counseling services in the five boroughs of NYC to parents of the estimated 300 infants who die yearly. An excellent system of death investigation, counseling and informational activities, referral and follow-up have been implemented. Autopsies performed by a qualified professional were performed in about 80% of the 215 infants who died of SIDS during the past year. Genessee Valley Project - This project provides services in nine counties in and around Rochester. There is a well-organized management system and they present excellent educational programs. The project has been successful in introducing SIDS information into nursing school

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State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
			curriculum and has prepared a video tape which is being considered for nationwide use in schools of nursing. Stoneybrook - The administrative placement of this project has recently been transferred to the Department of Social Welfare at SUNY at Stoneybrook. The project staff has provided direct services to families of Nassau and Suffolk Counties, but they now are being encouraged to utilize the existing resources in a more effective manner and to consult with those resources. In addition, they have been asked to address the problem of case identification and confirmation of drug diagnosis as this has been a problem. The remainder of the State has fragmented and sporadic services. Consultation will be available to explore how statewide services can be developed in this State.
36. North Carolina	160	State Wide Federally Funded Project. Provide very good services to families. Good integration of health agencies and voluntary groups. Good educational outreach.	Agree with NSIDSF comments.

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State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS*	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
37. North Dakota	22	No Federal Project Funds. Comprehensive program in North Dakota through passage of State Bill 2101 on March 1, 1977. Legislation provides for payment for autopsies and a part time coordinator to effect	Agree with NSIDSF comments. State has not requested Federal SIDS support.
38. North Mariana	data not available	No comment	Having just become a partial jurisdiction, North Mariana has not requested Federal support for a SIDS program. May be best to integrate a SIDS project into the MCH (Title V) program from the start.
39. Ohio	307	State Wide Federally Funded Project. Good educational outreach activity. Full services for families inconsistent throughout state. Project is gaining recent momentum in working towards the provision of good services statewide.	This project provides statewide SIDS services. The death investigation system consists of M.D. elected as coroners and has been very effective as documented by the autopsy rate of 83% for infants who die suddenly and unexpectedly. Agrees with the NSIDSF statement that services for families are inconsistent throughout the State. Project has been encouraged to focus attention on preparing counseling resources througout the State in order to improve the quality of services.

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State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
40. Oklahoma	84	No Federal Project Funds. Has a Statewide Medical Examiner's System which is cooperative. There is a good working relationship being established with the Health Department. A loose, but workable program that provides most services for families has been established throughout the State with impetus from health professionals and community groups working together. Will need assistance, time and training programs to create a more permanent system. Assistance provided through NSIDSF Contract Work.	Although there is a State Medical Examiner's system established in Oklahoma, it is reported that the identification of possible SIDS victims, the rise of SIDS on death certificates and the reporting of cases remains inconsistent in the rural areas and among the Indian populations. Public health nurses have been providing counseling services for families who have lost infants to SIDS since 1974. A grant application was submitted and reviewed this spring, however, the reviewers did not recommend the proposal for funding. the state has requested consultation and intends to reapply for support in 1979.
41. Oregon	71	No Federal Project Funds. Oregon maintained a model program for services to SIDS families for quite sometime due to commitment of individuals within the statewide Medical Examiner's office. State funding provided training for service providers several years ago but with the cessation of that funding, full services for families has deteriorated. Autopsies performed and deaths appropriately certified. Follow-up services are inconsistent. Good interest in State Health Department. NSIDSF Contract Work to provide temporary assistance in reinitiating training programs.	Agree with NSIDSF comments. Consultation is available and State will be encouraged to seek Federal support in 1979.

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State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
42. Pennsylvania	298	Federally Funded Project In Philadelphia and Eastern Pennsylvania. Provides very good full services to families in areas served. Has plans to extend services. Provides good educational outreach. NSIDSF Contract Work initiated in Western Pennsylvania, primarily in Pittsburgh and Erie areas. Good cooperation with Medical Examiner and good community stimulation. Contract work will implement training programs for full services for families in those areas.	This Federally supported SIDS project now provides statewide services in cooperation with the State Department of Health (MCH).
43. Puerto Rico	140 but may not be a relaible figure	No comment	No Federal SIDS support has been requested. Will be encouraged to begin planning for a SIDS program to be initiated by July 1980.
44. Rhode Island	22	State Wide Federally Funded Project. Provide very good services to families. Good educational outreach.	Agree with NSIDSF comments. For the past 3 years, Rhode Island, under the auspices of the Department of Health, has had an emminently successful SIDS program as measured by various criteria such as the percent of parents reached (80%), the percent of those reached who accept counseling (91%), the review of counselor reports concerning the adjustment status of parents and by the number of counseled parents who have expressed interest in joining peer counseling team. Under Rhode Island law, all instances of unexplained death are reported to the office of the Medical Examiner.

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State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
45. South Carolina	93	No Federal Project Funds. Through NSIDSF Contract Work, a statewide system for full services for families is being established. Strong interest in the State Health Department was key to this activity. State will need some	This State has not requested Federal SIDS support although interest has been expressed by the State Health Department. They will be encouraged to apply in 1979 if funds are necessary to supplement their local resources.
46. South Dakota	22	Federally Funded Project awarded 1/1/78 for Statewide Program. Prior NSIDSF Contract Work created full services for families in Sioux Falls and Rapid City (approximately one quarter of state population.) Funding will allow for the extension of services statewide and the maintenance of current services.	South Dakota has a consistently high infant mortality with a post-neonatal death rate of 4.9/1000 live births. Approximately 50-65 cases per year are contributed to SIDS. Because of the low population density and large area, initial activities and goals have centered around the project efforts to establish communication network between health professionals Emergency Medical Services, coroner, volunteers and families.
47. Tennessee	130	No Federal Project Funds. A Federally funded program did exist for two years as a county program in the Nashville area. Funds were discontinued in 1977. In Memphis, Nashville and a few urban areas, autopsies are performed and SIDS is used on death certificates. Little happens after that. In Memphis, the Health Department is willing to be involved but cannot get	Agree with NSIDSF comments. No request for Federal support has been received. Consultation will be available and they will be encouraged to seek Federal support to initiate a statewide program.

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State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
		routine referrals. State Health Department has been reluctant to commit themselves to programs for SIDS.	
48. Texas	453	Federal Project Funds in Houston Area. Provide excellent full services to families in area served. Provide good educational outreach. Federally Funded Project in Dallas area was just recently funded. Too soon to evaluate.	Houston - Agree with NSIDSF comments. This is one of two projects in the State of Texas. It encompasses the Houston/Galveston area and includes a number of rural communities. Major problems faced in this State are the death investigation systems and the poor communication networks. Dallas - This project was funded in January 1978. It provides services for 49 counties in northeast Texas. With the exception of Dallas County, there is no effective and reliable system for identifying SIDS victims. Only a few autopsies are performed due to the lack of proper medical facilities prepared pathologists, and insufficient funds. A major goal of this program is to develop plans and activities to assure a uniform system for identifying SIDS cases for providing services and for the implementation of educational and informational programs. Plans have been initiated to develop an approach for a statewide SIDS program in cooperation with the State

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State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
			Department of Health. The State will be encouraged to apply in 1979 for funds that may be needed to supplement their local resources.
49. Trust Territory	data not available	No comment	No Federal SIDS support has been requested. May be best to integrate this program into the MCH (Title V) program from the start.
50. Utah	71	State Wide Federally Funded Project. Project provides very good, consistent full services for families. Good educational outreach.	Agree with NSIDSF comments.
51. Vermont	13	State Wide Federally Funded Project. Project provides good family services. There is some resistance to this program by the general population, but not by the families served. Good educational activity done, more is probably needed.	Educational programs have been provided for health professionals as well as the general public. The counseling system requires that 3-5 home visits be made by Public Health Nurses for each family.
52. Virgin Islands	data not available	No comment	No Federal SIDS funds have been requested. May be best to integrate this program into the MCH (Title V) program from the start.

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State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS *	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
53. Virginia	134	No Federal Project Funds. No full services appear to exist within the State. The Chief Medical Examiner of Northern Virginia provides good autopsies and utilizes SIDS on death certificates. Through local voluntary agencies some hospitals and appropriate certification also occurs in Roanoke areas and Norfolk/Newport News areas. Again, follow-up may be inconsistent or non-existent. Good components to full services exist. Needs further effort to tie together into a consistent program, possibly a statewide system.	No Federal funds have been requested. Consultation is being provided to official agencies and voluntary organizations in the State in order for a statewide plan for SIDS services to be prepared. They will be encouraged to apply for support they may need to supplement their resources and to initiate a SIDS program in 1979.
54. Washington	99	Two Federally Funded Projects for State Wide Coverage. Seattle Project covers 22 western counties of the State. Project seen as excellent and very successful. Full services provided to areas served with good integration with other agencies. Good educational outreach. Spokane Project covers 17 counties in eastern part of state, parts of Idaho and Montana. Educational activities provided but services to families seen as inconsistent.	As of July 1, 1978, the Seattle SIDS Information and Counseling project is the single grantee for the State of Washington. The Spokane grant was terminated on June 30, 1978. It is anticipated that the quality of services throughout the State will be consistently of very high quality.
55. West Virginia	56	No Federal Project Funds. A statewide medical examiners system exists. A full service program for families was implemented in 1975-76 through NSIDSF Contract work linking up the Medical Emergency system with the Mental Health Department. Would appear to be working with most services being rendered to families.	No Federal SIDS support requested. The State reports fragmented and inconsistent services to families. Consultants have been available from the Maryland SIDS Information and Counseling project. State will be encouraged to apply for Federal support to supplement their own resources in order to initiate a comprehensive SIDS program in 1979.

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State Analysis of Sudden Infant Death Syndrome (SIDS)

August 1978

State	Estimated SIDS*	National Sudden Infant Death Syndrome Foundation (NSIDSF) Comments	Sudden Infant Death Syndrome Program Office Comments
56. Wisconsin	130	No Federal Project Funds. Good interest generated in State Health Department. Many attempts have been made to create full service programs in Madison and Milwaukee, in addition to other areas. Committed and interested health professionals have participated in those efforts. Full services do currently exist in the Green Bay area, coordinated through a local hospital. Current interest involved in creating a state wide system and an application for Federal funds. State legislation for full program services currently pending. Problem areas have been primarily in autopsies and reporting, in addition to typing in reporting with service providers. NSIDSF Contract Work assisting. Wisconsin appears ready for a statewide program which will require time but is possible.	The State Health Department grant application for a statewide SIDS program received a favorable review during the current grant cycle. It is anticipated that funds will be available to make the grant award within the next few weeks. The Green Bay SIDS program has been supported in the past by the Wisconsin State Health Department, MCH (Title V). The enactment of State legislation on SIDS in 1977 will benefit the effectiveness of the SIDS program in this State.
57. Wyoming	13	No Federal Project Funds. Through educational programs directed to Coroners, physicians and emergency personnel, comprehensive services for families now exist in the six most populated areas of Wyoming, with the program available statewide. The State Health Department has designated SIDS a high priority and coordinate the follow-up services. The Funeral Directors (which represent the Coroners) has been extremely cooperative. NSIDSF Contract Work.	No Federal funds have been requested by this State. Consultation, educational programs, and family services have been available to Wyoming from the Colorado SIDS Information and Counseling project.

*Based on national average of two SIDS per 1,000 live births.

SIDS - Senator Cranston - Inserts for the Record - Hearings, Mar. 1, 1978

Question No. 11

(A) How many full-time, part-time and full-time employee equivalents work in the area of SIDS, broken down by activity?
(B) Please provide for the record a braekdown of the $198,000 for program support in SIDS.
(C) Is this money used for anything other than staff positions?

Answer

(A) There are 4 full-time employees whose time is devoted to the management and operation of the SIDS program. The time of these employees is devoted as follows:

	Full-time positions
Professional, managerial	**2**
Administrative program assistance	**1**
Clerical	**1**

The other two employee equivalent years are divided among various persons each devoting part of their time to various activities related to the management and operation of the SIDS program including:

-administration
-budget
-planning
-legislation
-regulations
-data collection and dissemination
-other various professional staff efforts

None of the employees working on SIDS are broken down by activity.

(B) Sudden Infant Death Syndrome Program Support Estimate

	Fiscal Year 1979
Personal Services and Benefits	**$145,000**
Travel	**15,000**
Other Program Costs including evaluation, other service contracts and purchase orders	**38,000**
	$198,000

(C) The program support funds are used for travel for SIDS personnel, printing, supplies, data processing and other small purchases, small purchase orders for consultation and other assistance, conference charges and to pay a share of various administrative charges relating to building space, payroll, accounting, etc. The funds also pay for part of evaluation projects as required by law. The Bureau of Community Health Services which manages the SIDS program has assisted the program by defraying part of the costs of these necessary program operation expenditures from other resources of the Bureau.

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United States Senate
COMMITTEE ON HUMAN RESOURCES
WASHINGTON, D.C. 20510

March 17, 1978

Honorable Julius Richmond
Assistant Secretary for Health
Department of Health, Education,
and Welfare
200 Independence Avenue, S.W.
Washington, D.C. 20201

Dear Julie,

It was a real pleasure having you testify before the Subcommittee on Child and Human Development on March 1 during the hearing on S. 2523, legislation to extend the Sudden Infant Death Syndrome Act. Your testimony was extremely informative, and I look forward to working closely with you in this area in view of your deep personal concern and direct experience.

In reviewing the testimony you presented and other documents and information my staff has acquired, I find that there is a discrepancy between figures given at the hearing and provided at various times by HEW officials in response to staff inquiries. This discrepancy is with respect to the amount of money being allocated in fiscal year 1978 and expected to be allocated in fiscal year 1979 for research in SIDS (both specific and related) to be carried out by the National Institute of Child Health and Human Development (NICHD).

It has been my understanding that in fiscal year 1978 $9.9 million has been allocated for SIDS research, and that the President's request for this purpose for fiscal year 1979 is $10.4 million. This information is substantiated, wholely or in part, by your oral and written testimony before the Subcommittee. However, in discussions with Senate Appropriations Committee staff, and subsequent conversations with NICHD staff, we have been told that SIDS research activities are funded at a level of $12.5 million in fiscal year 1978 and that $16 million has been requested for fiscal year 1979. My staff has been told by officials at NICHD that the additional $2.6 million in fiscal year 1978 and $5.6 in fiscal year 1979 is attributed to an expanded definition of "SIDS-related research" -- a term which includes high-risk pregnancy and high-risk infancy.

I would appreciate yourconfirming this information and explaining why this information was not provided at the time of the hearing.

In addition, I would appreciate your providing a report on the precise fiscal year 1978 and fiscal year 1979 funding levels for all NICHD research in high-risk pregnancy and high-risk infancy, showing a breakdown of the specific amounts allocated for SIDS-related studies and specific amounts for studies of all other disease entities, with indications as to each specific area of investigation and the amount allocated for each.

I would greatly appreciate a response to this letter by March 22. Please hand deliver this response to Room 229-C (Attention: Mary Aronson).

Once again, thank you and your staff for your cooperation with the Subcommittee in this issue.

Cordially,

Alan Cranston
Chairman
Subcommittee on Child and
Human Development

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE ASSISTANT SECRETARY FOR HEALTH
WASHINGTON, D.C. 20201

MAR 22 1978

The Honorable Alan Cranston
Chairman, Subcommittee on Child and
  Human Development
Committee on Human Resources
United States Senate
Washington, D.C. 20510

Dear Alan:

Thank you for your letter of March 17 regarding my testimony on the Sudden Infant Death Syndrome research program. I share your concern for this important activity and appreciate the opportunity to clarify the budget information.

The figures of $9.9 million and $10.4 million for SIDS research in Fiscal Years 1978 and 1979 respectively cover that research which pertains specifically to Sudden Infant Death Syndrome plus that research which may not relate specifically but has general application to the problem. These amounts are used whenever there is a need to reflect the magnitude of research performed under the Sudden Infant Death Syndrome Act. The higher figures, $12.5 million in FY 1978 and $16 million in FY 1979, result when you add those items which result from the Senate Appropriation Committee's recognition of additional research which could contribute to a breakthrough in understanding this disease. The Senate Appropriations Committee Report (No. 95-283) for FY 1978 acknowledged the SIDS researchers' belief that the fatal illness may be tied to events happening before birth as well as events in early infancy. The Committee urged the Institute to perform studies in the related areas of high-risk pregnancy and infancy, the growth of the fetus in the womb, the birth process and how labor starts, and prematurity and low birth weight. In addition the Institute was to investigate the relationship of nutrition and genetics in SIDS and related problems. Adding the cost of this related research results in the higher figure. We have used both sets of figures with an explanation when the larger ones are used.

I am enclosing a tabular breakdown of our funding for research in high risk pregnancy and high-risk infancy with SIDS as a major subpart of that activity. I have not listed separate figures for specific areas such as fetal development, prematurity, and low birth weight because these subjects are scientifically overlapping and would be extremely difficult to separate for fiscal purposes.

I regret the confusion over my testimony and hope that this information is more useful.

Sincerely yours,

Julius B. Richmond, M.D.
Assistant Secretary for Health

Enclosure

NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

High Risk Pregnancy/High Risk Infancy

FY 1978 and FY 1979

	FY 1978	FY 1979	Research Areas
SIDS:			
Specific	$4,795,000	$5,030,000	Includes SIDS research in the areas of pregnancy, fetal development, prematurity, low birth weight, and neonatal adaptation; also includes development of indices of risk for SIDS and Studies designed to help families in dealing with a sudden infant death.
General	5,105,000	5,370,000	
Subtotal	9,900,000	10,400,000	
SIDS-related	2,600,000	5,600,000	Includes areas of high risk pregnancy and high-risk infancy related to SIDS, such as maintenacne of maternal health and nutrition during pregnancy, development of tests for fetal health status, earlier recognition of pregnancies at risk; also includes other studies in pregnancy, fetal development, prematurity, low birth weight and neonatal adaptation which are not direct SIDS projects but may have important implications in the search for the causes of SIDS and methods of prevention.
Subtotal, SIDS	12,500,000	16,000,000	
Other HRP/HRI	15,072,000	18,775,000	
Total HRP/HRI	27,572,000	34,775,000	

Senator **Cranston**. Thank you. We'll be doing what we can to move things forward.

We now have witnesses from the parent organizations. For the International Council for Infant Survival we have Nancy Lefebvre, president, of Philadelphia, Pa., and Saul Goldberg, founder and honorary life board member, Baltimore, and Dr. Thomas Chase, a SIDS parent, from Auburn, Ala.

Representatives also are here from the National Sudden Infant Death Syndrome Foundation, Carolyn Szybist, executive director, Chicago, and Philip Schaefer, a SIDS parent, from Belvedere, Calif.

We appreciate very much your presence, and you may proceed in whatever order you have agreed upon.

Would you please first identify yourselves, like from the right to the left, for the record?

Mr. **Schaefer**. Philip Schaefer, from Belvedere, Calif.

Ms. **Szybist**. Carolyn Szybist, Chicago, Ill.

Ms. **Lefebvre**. Nancy Lefebvre, from Philadelphia, Pa.

Mr. **Goldberg**. Saul Goldberg, from Baltimore.

Dr. **Chase**. Thomas M. Chase, from Auburn, Ala.

Senator **Cranston**. Whoever is going to lead off, please proceed.

STATEMENT OF NANCY LEFEBVRE, PRESIDENT, INTERNATIONAL COUNCIL FOR INFANT SURVIVAL, ACCOMPANIED BY SAUL GOLDBERG, FOUNDER AND HONORARY LIFE BOARD MEMBER, GUILD FOR INFANT SURVIVAL; DR. THOMAS M. CHASE, SIDS PARENT, AUBURN, ALA.; PHILIP SCHAEFER, SIDS PARENT, BELVEDERE, CALIF.; AND CAROLYN SZYBIST, EXECUTIVE DIRECTOR, NATIONAL SUDDEN INFANT DEATH SYNDROME FOUNDATION

Ms. **Lefebvre**. Mr. Chairman, I thank you for the opportunity to speak here this evening, representing the International Council of Guilds for Infant Survival across this great country.

At the very heart of our concerns are the thousands of families each year devastated by the death of their babies, yet still asking the unanswered question, "Why?"

Massive figures only tend to mask the grief, but let us all be aware while we are sitting in this Senate hearing tonight, that three babies will have ceased their brief life in this world, falling victims to SIDS.

To this end—that the concern of parents might be heard—the Council of Guilds is represented this night by SIDS parents: myself, Saul Goldberg of Baltimore, a cofounder with his wife, Sylvia, of the Guild for Infant Survival, and honorary life member of the Council's Board of Directors; and Dr. Thomas Chase, who has served his community of Auburn, Ala., as a Guild representative and is currently on the Council for Infant Survival, Medical Advisory Board.

We are excited about the potential resources presently in use and those yet virtually untapped, available to SIDS parents, and ultimately for all parents in their childbearing years.

Encouraged as we are in the enlightenment and education of the public and those in public health service, we are disappointed to see much of the already very limited dollars being directed to the professionalization: of something that needs very little professionalization specifically the grieving process.

We are not dealing with degrees and intelligence quotients. Our focus is the American family who has lost a baby suddenly and unexpectedly. They need basic information. They grieve, as anyone would, having lost a loved one. Further, due to the nature of SIDS, they need to know that they are *not* alone. Parents and families need to be in touch with those they can best identify with, to be supported and nurtured. These are the people who can, by their lifestyle, not by professional expertise, show that grief can be worked through to a positive, productive continuation of life.

This long-term support is so readily available, and yet unpurchasable by Federal funds. I am speaking of a commodity not available in capsule form: man's humanity to mankind.

A further concern is this: A commitment to eradicate SIDS and, in the interim, to administer humane services of information and support cannot effectively be administrated by part-time HEW-MCH personnel. Current staffing is inadequate if the taxpayers' money is to be cost effective in a program consistent with the high ideals of Public Law 93-270.

Sensitive, dedicated, and highly qualified as the current HEW-MCH SIDS administrator is, deserving of our respect and admiration, the current SIDS program reflects only 3 percent of her total budget responsibility. Authority without clear guidance does not lead to responsible cost-effective management.

In conjunction with the community service aspect of Public Law 93-270, and the research phase, I would encourage increased attention to the preventative aspects that are implied in identifying at-risk factors and utilizing home monitors. Though controversy exists in the medical community, many pediatricians seem convinced that home monitors for certain infants are saving lives. It would seem no less a public responsibility to provide life-saving monitors than it is to provide life-saving dialysis or respirator machines under medicaid or a similar program.

Lastly, the Council of Guilds for Infant Survival is not satisfied with the project-by-project approach to SIDS services. Projects are invaluable in urban and heavily populated areas. An example, in point, of a great need is the District of Columbia. There is no community project here. Couples are faced with this every day of the year, and yet there is no service they can turn to. This is also true in the great and neighboring State of Virginia.

There is, however, question as to project efficacy in rural areas. There is need to thoroughly evaluate and access current project programs, gleaning from this information, and working toward more effective methods to reach States presently not covered by the statewide medical examiner systems.

In closing, if there is, as I sense in this room tonight, a determination to conquer this evasive problem, SIDS, it will demand a national commitment. Such a commitment will involve the interrelated and cooperative talents and efforts of government, researchers, health professionals, and parent organizations. To this end, and speaking from my heart, I urge you to meet the challenge squarely, "To Keep Each New Life Living".

Thank you.

[The prepared statement of Ms. Lefebvre follows:]

Suplemental written testimony
Submitted by Council of Guilds for Infant Survival
For: Public Hearing, Committee on Human Resources,
Subcommittee on Child and Human Development
Senator Alan Cranston, Chairman
To consider revision and estension of the Sudden
Infant Death Syndrome Act of 1974

ObservationsAbout P.L. 93-270

EXPERIMENTAL RESEARCH APPROACH. Public Law 93-270 has been viewed by the Council as an important beginning of a systematic approach to end the scourge of the number one killer of infants between ages one month and one year, after an eon of neglect and worse. An intelligent disbursement of Research funds has been made to a variety of investigators, some of whose theories would seem to be mutually exclusive. We can therefore expect, within the next several months, to see a narrowing of the fields of investigation, as some of the theories being investigated become confirmed as "false leads". Other investigations may illuminate important clues or findings which will deserve expanded and intensified research. Scientific investigation into the unknown is necessarily surrounded by risk and uncertainty, but the systematic approach being taken by NICHD has already produced important findings and suggested directions for more intensive study. The Subcommittee will hear from some of the most productive investigators. As a voluntary association comprised mostly of parent-survivor-victims, we wish to indicate our support and encouragement to the Congress, NICHD, and the investigators to continue and redouble efforts.

COUNSELING, INFORMATION, EDUCATIONAL AND STATISTICAL PROGRAMS. Congress wisely requires evaluative research following new programs. PL 93-270 established more than a score of Community Projects which have now, for the most part, been through the initial development stages; have been functioning for several months to a few years; and now are at the early stages of being evaluated. Council of GIS is represented on an advisory committee to the evaluation process and believes that important, relevant data will soon be available upon which to base valid evaluation. Successor-legislation to PL 93-270 will be more intelligently designed with the evaluation data on hand.

Pending the results of the evaluation now in progress, observations by affiliated Guilds for Infant Survival about the Projects may be of interest. Congress, we believe, intended the Projects to be forerunners of more permanent, comprehensive services; intended that lessons learned from the combined experience of the several projects be applied to new legislation and new programs.

Until the development of the Projects under PL 93-270, virtually any services provided to SIDS victim-families was under the auspice of Guilds for Infant Survival or the National SIDS Foundation. Since the development of the Projects, many of our Guilds observe, a wedge has been driven between the professional staff of the projects and the very volunteers who oriented the staff to the problems and helped to train those staffs. Professionalization has usually meant an alienation

Page Two: Suplemental Testimony, CGIS

of the very Guild members who sought projects and eagerly anticipated a productive, cooperative relationship. One lesson learned from the Project experience deals with the unanticipated consequences of professionalization, the tendency for the professionals to consider only themselves as uniquely qualified to hold opinions about and render services to the SIDS community-of-interest. To rectify the unanticipated consequences, if these are verified by the evaluation-research, will require imaginative drafting of legislation and imaginative administration. We believe it possible to integrate SIDS services with public health and fully utilize the knowledge, experience, special sensitivity and desire-to-serve of the parent groups.

The second lesson may be that "good will" and a cooperative approach may be insufficient and inadequate to assure the availability of autopsies - - the only method currently in use to obtain a SIDS diagnosis or finding. Many if not most localities lack the knowledge, techniques, financial resources, or the motivation to provide an autopsy which would be capable of identifying SIDS as a cause of death. Special legislation is needed to accomplish this purpose.

The Bureau of Community Health Services could, perhaps, build in-house expertise in pediatric pathology parallel to existing expertise in a host of other disciplines. With the assistance of the national associations of pathologists and forensic medicine, BCHS would then be able to develop standards and guidelines for SIDS autopsies (or qualified post-mortem examinations) and designate at least one institution in each state, perhaps the pathology department of a state medical school, to survey and approve coroners and/or medical examiners in that state as competent to perform autopsies/post mortem examinations leading to a SIDS finding. Mentioned here is a question which the Council of GIS would like more attention on: Is an autopsy required to substantiate SIDS? Or would a qualified post-mortem exam, comprised perhaps of full body X-ray and spinal tap be sufficient to rule out the 15% that die from other causes? Feasibility and cost are to be considered as well as parental concerns, many of which are negative to the mechanism of autopsy. To continue, Federal reimbursement is needed as incentive to localities served by approved coroners, and in other localities to transport the little bodies to the nearest approved person to perform the post mortem. Without the capability to establish SIDS as a cause of death, valuable data is forever lost, the identification of victim-families is impossible and therefore the provision of factual information and/or counseling services is unfeasible.

A host of controversial issues is raised with respect to the provision of services. One has to do with the imposition of "counseling", the role of the person providing counseling, and the implication of offering counseling. Essentially healthy persons have been obeserved to develop "sick" symptoms when in the presence of health or medical personnel, just as medical students commonly develop the symptoms of the disease they are studying. This may be particularly true of bereaved families who, because of their grief, are particularly suggestible. Does the imposition of a mental health type counselor tend to "fix" normal grief reactions which, left alone, would be more transient and temporary?

Another issue concerns the imposition of public health and/or public safety officials. A baby dies suddenly and unexpectedly, and shortly after a uniformed public health or safety official is seen calling on the bereaved family. Is this apt to throw a darker cloud of suspicion upon the family?

Closely related to the above are the implications of the person-to-person approach -- a telephone call perhaps followed up with a visit from parents who have previously suffered a SIDS loss. Even though such parents may be more knowledgeable about SIDS than most health professionals, is the factual information they present as readily acceptable as if it were to come from a physician or nurse?

Another question concerns the nominated goal of "excellence" vs. "universality". Should available federal resources strive for SIDS centers in those areas in which "excellence" can be achieved, or should resources be devoted to the goal of assuring some services in every locality? Ideally, of course, the issue may be resolved towards striving for excellence in every locality, but the realities of public health services under state and local auspice suggests, strongly, that excellence is not often achieved universally. This issue may be resolved as we learn more about the importance of "excellence" as it is very possible that minimal services designed mainly around providing factual information will satisfy the "service" needs of perhaps 90% of survivor-families. The Council of Guilds for Infant Survival believes that it may be premature to invest further in the goal of excellence in the absence of clear evidence that the relatively expensive, specialized, professionalized staff really makes a difference. We believe that the burden of proof should be on those who claim the investment in "excellence" offers measurable benefits.

PUBLIC EDUCATION. Public education, we believe, has already contributed significantly to minimizing the negative consequences to survivor-families. Our own efforts have been greatly augmented by those of our sister organization, the National SIDS Foundation, several community projects, and the Office of Maternal and Child Health, Bureau of Community Health Services, DHEW. A very good beginning has been made; much more is needed.

INFANT APNEA MONITORING MACHINES. Throughout the country Guilds for Infant Survival are raising funds so that community hospitals may purchase monitoring machines for infants considered to be "at-risk". Several studies, particularly those in Baltimore and Boston, offer strong evidence that some babies which would otherwise succumb to death because of prolonged apnea, are saved through resuscitation and warning by home monitors. Though controversy exists within the medical community, many pediatricians seem convinced that home monitors for certain infants are saving lives. Voluntary efforts to raise money and provide these monitors cannot keep up with the demand from anxious pediatricians and more-anxious parents. Though these monitors may be less expensive than renal dialysis machines for kidney or respirators for chronic emphysema; and while the need for the monitor is usually for a more brief duration than the other machines, it would seem no less a public responsibility to provide life-saving monitors than it is to provide life-saving dialysis or respirator machines under Medicaid or a similar program.

SUMMARY The Council of Guilds for Infant Survival believes it is about time to consider the community project concpt of SIDS services to be altered, in favor of assuring that competent post-mortems, timely and factual reporting and information about SIDS, be available to every victim-family. In the interest of saving infants' lives, we would like to see expended every penny which can be wisely invested in research. Public funds are needed to provide incentive/assurance that post mortem examinations, essential to SIDS findings, are available in every locality and to every set of parents tortured by the question, "Why did my baby die?", and basic to the collection of fundamental data necessary for research and programming. Additional public funding is needed to provide, at least, a "loan closet" in every locality where competent pediatricians recommend home-monitoring for infants considered to be "at-risk".

Senator Cranston. Thank you very much for your forceful and eloquent statement. It was helpful to us. I also appreciate your directness and your brevity.

Since we have so many witnesses, I would request that each of you be quite brief. Your written statements, of course, if you don't complete them, will go in the record in full.

Mr. Goldberg. Mr. Chairman, my name is Saul Goldberg from Baltimore, and I thank you for your interest in the problems of sudden infant death syndrome.

When Public Law 93-270, the Sudden Infant Death Syndrome Act, was enacted in 1974, this was the first piece of legislation specifically dealing with this number one killer of children in their first year of life. After our 11 years of effort and struggle, a milestone in the fight against SIDS had been reached.

I believe that Public Law 93-270 has a 3-year life now running out, so I assume this subcommittee is taking input to determine the need for and the nature of continuing SIDS legislation and how it might change from current law.

It is unfortunate that these hearings occur on March 1. At this point in time we have no objective method of evaluating the results of 2 year's operations under this legislation. Only now are evaluation techniques being developed. Were these hearings to be held later in the year, we would have a better idea of how both research and family service programs are doing and if our money is truly well spent.

Therefore, I am testifying today to give you insights from my own experiences and knowledge as a father of a sudden infant death child, as cofounder of the Guild for Infant Survival, as past president of the Council of Guilds for Infant Survival, a witness in previous hearings before committees of the Congress which designed the existing legislation, a project participant, and a former consultant to HEW in the implementation and review of the law, the use of Federal regulations, and maternal and child health guidelines and their application in the funding of projects.

Frankly, while there has been success, I wish to address the problems due to weaknesses in the law and very liberal interpretations of the Federal regulations.

We seem to have a hodgepodge of information and counseling projects, all going off in their own direction, in their own isolated way, serving their own cause. Some projects seem to be performing a masterful service, while others make little positive impact or are not fully developed.

We cannot determine if projects are learning from each other to improve themselves. HEW officials tell us they hesitate to redirect projects that seem to be causing consternation. There are many reports and statistics. HEW is loaded with quantity. What we don't know is the effectiveness of services, and it is this effectiveness to SIDS parents that is the purpose of the law, to help them understand, to ease their pain, to point the way to a normal future.

I find in some cases the operation of projects is in apparent conflict with the intention of the Congress. At the joint meeting of the Senate Subcommittees on Children and Youth and on Health, in September 1973, I was asked by Senator Kennedy how the Guild for Infant Survival could so successfully help stricken parents survive the guilt, grief, and shock of such a horrible tragedy when Government agencies had difficulty.

I responded that the Guild was made up of human beings, one person helping another, without a lot of paperwork and red tape.

Then Senator Walter Mondale complimented the effectiveness of Guild involvement, services and accomplishments.

Lately there is a definite trend for the Government to seek the partnership of citizens to solve our many problems together in the true spirit of America and democracy, a partnership that has made our country strong and great.

In the Sudden Infant Death Syndrome Act itself is the phrase, "Each application shall provide for appropriate community representation in the development and operation of such project." Here it is referring to the information and counseling program. It would seem logical that that part of the community, that is, the people most willing to help, and most likely to contribute through their own experiences, would be from the very organizations of SIDS parents who initiated the fight against sudden infant death syndrome and brought it to congressional attention. I speak of both the National Sudden Infant Death Syndrome Foundation as well as the Guild for Infant Survival.

Yet the degree of participation in the development and operation of projects varies widely, and in some instances does not exist by ignoring or bypassing this available resource.

It may be given token recognition, in ineffective community councils, which are merely advisory and do not oversee project operations. Thus the term "appropriate community representation" is not specific enough. I suggest this phrase be changed to spell out SIDS parents groups.

Interestingly enough, when only these volunteer groups were providing services prior to the legislative program, and we requested support and cooperation from community health professionals, there was little or no response. Now that there are funded positions at good salaries, the professionals are there.

Ironically, some of us have imparted our own knowledge and experience to those new in the projects and ignorant of SIDS, who then supplanted our services.

SIDS parents citizens do have a distinct and meaningful role to play in family service projects. For example, ony we can honestly say "I know what you are going through". Only we can answer questions like, "What did you do with the baby's clothes; how did you feel when Christmas came around; how often do you visit the baby's grave; do you talk about the baby" and many more. And even though it might seem like the end of the world at the time, only we are living proof that mothers, fathers and siblings continue to live their lives. "We have survived and you will too."

When we stand before them and sit down and talk with them, one person to another, then they will know the hope we represent for the future, when no more babies will die. The best of projects cannot do this without us.

The law is also weak on the significance of research, by not specifying an authorization for appropriations in this field. Despite this serious shortcoming, much credit and praise must be given to Dr. Eileen Hasselmeyer and to Mr. J. U. Hunter for their initiative, foresight, and concerns in SIDS, to bring NIH to the level of research activities that we will be hearing about tonight.

Contrasting sharply with the paucity of research projects existing at the time of the 1972–73 hearings, we now aproach SIDS from the viewpoint of preventing live babies from succumbing to SIDS. I think there should be an ample amount of money authorized in new legislation for adequate research opportunities.

The existing Public Law 93–270 also requires reports to congressional committees on research applications and funding, estimates of the need for additional funds, and how NIH-requested funds relate to preceding years, and reports regarding the administration and results of information and counseling projects—and, Senator, this relates to some of the questions you asked the preceding panel.

As an interested constituent, I have attempted, in writing and by phone, to obtain copies of these reports. To this day, I have never received or seen one such report. If these reports exist, we would like to know how they can be obtained.

In the U.S. News and World Report of February 20, one part of its own study of American opinion indicates the public's ability to complain effectively about unsatisfactory goods or Government services, to retailers, manufacturers, and public agencies. After complaining about a particular problem, 80 percent of those who returned goods to retailers were satisfied; 56 percent of those who contacted manufacturers were satisfied. But only 37 percent of those who went to Government service were satisfied.

What faith do our citizens put in our Government? One way to improve the situation is to involve knowledgeable citizens in community programs wherever possible, and to listen to citizen's suggestions and inputs seriously. I believe this the the most important function of hearings like this one in our democractic form of Government.

I respectfully request that members of this subcommittee carefully consider what we say here in this light.

Thank you for this opportunity to participate in the democratic process, so that all families can receive the best in services and attention that we all can provide, so no baby shall have died in vain.

Senator CRANSTON. Thank you very much for your very helpful and strong statement.

I would like to say on those reports that the law requiring them to be submitted has expired. We'll see what we can do about that. In the meantime, I think we can help you get the reports you referred to. I assure you we will get the reports you requested tonight.

Mr. GOLDBERG. Thank you. That would be helpful.

Dr. CHASE. Senator Cranston, last week I saw two patients, both of whom had experienced the death of their infants. One parent had lost a infant 8 months old and was told the cause of death was pneumonia. She has labored under the misconception that there was something she could have or should have done to have prevented the cause of that child's death, until I saw her last week and focused her attention on the sudden infant death syndrome, and her's being a very typical case.

The other patient was a young girl who delivered in the summer of 1977, with an infant who died 8 weeks later. She brought the child to the emergency room and the child was pronounced dead. An autopsy was done and, fortunately, the diagnosis was properly recorded on the death certificate as sudden infant death syndrome.

The patient, however, received some sympathy but no worthwhile counseling. When I discussed this with her some 5 months later, she said she had never heard of the syndrome of sudden infant death.

Here at a point in time when adequate counseling and adequate information are known and should be available, this patient is carrying unnecessary guilt from complete lack of information for these many months.

My own experience, with the unexpected death of my son in 1974, a 5-weeks old infant, was quite different. We did receive the autopsy report of sudden infant death within 12 hours, but then, despite the fact that three of our best friends were pediatricians, they were not able to pinpoint any worthwhile information or provide any worthwhile counseling. It was not until we were able to receive the information brochures from the volunteer parent group that we even began our process of recovery.

Quite to the contrary, the family from Mobile and surrounding counties in Alabama where SIDS projects have been provided, is approached within 24 to 48 hours of the event of the unexpected loss of their infant. They are informed of the possibility that this may be a sudden infant death and are given appropriate information. An autopsy is provided and continued counseling is then offered.

Sudden infant death is a devastating syndrome. It touches the lives of young couples who many times have never been confronted by tragedy; it touches them in a way that frequently tears apart a marriage and an entire family relationship. It affects the siblings and it affects the extended family.

It is a silent killer, and if it were not for people like the Goldbergs and the volunteer agencies, for instance, the Guild for Infant Survival and the National Foundation of Sudden Infant Death Syndrome, as well as for the federally funded projects, this silent killer would remain silent and only those families devastated by it would remain with their guilt.

My professional role as an obstetrician, intimately involved with maternal and child health and welfare, encourages my desire to testify on behalf of the sudden infant death funding. Every knowledgeable parent fears the unknown, either subconsciously or consciously, and dreads the catastrophy of sudden infant death. As a parent who has lost my own child, I was thrilled with the passage of the SIDS Act in 1974. Upon reviewing the law I was initially disappointed that funding was not adequately granted for research. I felt, however, that funding for public education and family counseling would be to our ultimate advantage.

The SIDS projects mostly funded through the public health agencies went a long way to help many SIDS families. Those families, fortunate enough to have the help from the SIDS counseling projects, were no doubt able to resolve their guilt along healthy lines.

While the project adequately covers the needs of the family in its area, the family of the SIDS victim in areas of the State not covered by public health projects is only slightly better off today than that same family was in the 1950's and 1960's, and maybe no better off than it was 50 to 100 years ago. That family may remain uninformed, misinformed, occasionally suspicioned, and needless to say, disadvantaged in not receiving the valuable counseling offered by the projects.

I feel the State public health agencies and Federal maternal and child welfare agencies still have a long way to go in order to extend the understanding of present day knowledge to all those American families who grieve over the sudden deaths of their infants. Continued effort in health education must be made before all areas of this country, to see they are as well informed as those urban areas now fortunate enough to have SIDS projects.

What is even more important is that research funding must be available, especially to those centers of learning which have chosen to focus a concentrated effort on sudden infant death.

Enough information is now available so that specific research goals have been set and can be and are being achieved. As you may know, we are well on the way to being able to identify those infants who are at greatest risk of developing sudden infant death. Through intensified research and perfected studies it is hoped that in the next 5 years the infant of high-risk of sudden infant death can be identified, properly monitored, and saved.

There are notable research teams present in this country today who have provided enough basic science and research information to allow public health counselors to adequately counsel patients who lose infants to sudden infant death. The information thus far obtained has been very reassuring, and we are only frustrated by the lack of funding to complete the projects of finding the answers to this killer of infants.

Several years ago both parent groups listed as one of their main priorities and goals the availability of autopsies on every sudden unexpected infant death in the country. It is only through an autopsy that other causes of death can be excluded. We now have some very specific pathologic entities which we can look for in autopsies and can more accurately identify sudden infant death victims and lead to the discovery of a cause. Unfortunately, a large percentage of the population does not have the advantage of autopsy service, and unless funds are adequately provided and State medical examiner systems are proficient, autopsy service will not be provided.

Attention from maternal and child welfare agencies and public health funding is necessary to continue the important counseling and development of educational aids, appropriate brochures and pamphlets. Research funds specifically directed to sudden infant death must have high priority.

Thank you very much.

Senator **Cranston**. Thank you for your helpful testimony.

Mr. **Schaefer**. Senator Cranston, this is my inaugural testimony. I have never testified before any committee before. But I don't think the cause could be more important, nor the chairman more distinguished, so I thank you for the opportunity to appear.

Senator CRANSTON. Thank you for appearing. I know how difficult it is.

Mr. SCHAEFER. In the middle of October we took our baby, Amaris, to her first political rally to hear Jimmy Carter—and I think she liked him. On October 20 we celebrated her 1-year-old birthday party. On October 31, we took her "trick or treating." On November 2, we took her along when we went to vote. On November 14, we took her to the cemetery to say goodbye.

For in her baby book, under the category of "Childhood Illnesses," we recorded the following—description: SIDS; date: 11/13/76; Doctor: Leonards; treatment: none—final.

Our baby died of a disease which takes the lives of 10,000 infants a year nationally. So little is known about it. In fact, it was less than 10 years ago that it was first recognized as a disease. And yet, it is the largest cause of death among infants under 1 year old.

How do you say goodby to a baby who was such an important part of our lives? My wife had always wanted a girl, and Amaris Aliza—which means the joy whom God hath promised—brought us so much joy. She brought me happiness not only because of who she was and because I was able to see her little personality develop, but because of the special pleasure she gave to Judy.

In the book on November 13, 1976, Judy wrote:

> Amaris died of sudden infant death syndrome. Our darling, lovely, happy, laughing boom boom will not be sharing joy and fun with Ari, our son, Mommy, Daddy, or Armedia who stayed with us.
>
> I will remember how I loved to kiss and hold that boom boom and hear her laugh; how she crawled into the bathroom and played in the bottom drawer and how she liked to stand at the table top and throw walnuts on the floor. She was a special boom boom, our pride and joy. We will love her forever, and miss her forever.

How do you react to such an unexpected loss when you are given no time to prepare? During the summer in Oshkosh we took a "four generations" photograph that included Ari and Amaris, Judy and her parents, and Judy's grandfather, who is 95 years old. The grandfather, who has lived nearly a century, remains in excellent health. Our daughter, who lived slightly more than 1 year, is gone.

When Armedia, who was staying with the children, knocked on our door the morning of November 13, and whispered the baby's name, we knew that something was wrong. Judy rushed into the room and said, "Amaris is dead." I called the doctor and he called the police. The doctor said that he was fairly certain that the baby died of sudden infant death syndrome.

The police asked some questions. The coroner came, examined the baby, and then took her away in the car. Our son, Ari, who was 2 years old at the time, looked at the baby as she was taken away and said, "Baby Amaris go nite-nite."

That evening our pediatrician came back to the house and brought us a booklet about SIDS. Judy's uncle, who was a well-known pediatrician, came to our home and then went to the coroner's office to be present at the autopsy.

In spite of his knowledge, in spite of his accumulated wisdom, in spite of his reassurance that the baby did, in fact, die of SIDS, he was reluctant to allow his daughter, my wife's cousin, and the mother of small children, to visit us.

There has been, until now, a stigma attached to SIDS, and I suppose that uncle Harry wanted to make sure that nothing was contagious. I can therefore understand the agony that families, with no prior knowledge of this disease, go through.

I just read a remarkable book by Selma Fraiberg, "Every Child's Birthright," in which she writes movingly about what all infants need and expect in the way of motherly care and love. She writes about the bond that develops between the parents and the child. And yet, only now are we beginning to study the effects on the parents of the loss of a child.

What happens to the parent when she or he no longer hold a child in his or her arms and see it smile? Our society which has made such a remarkable stride against other diseases must not only make a similar effort against this disease, but should also attend to the psychological needs of the parents. And that is why the work of your subcommittee is so important.

We are beginning to regain our strength. The first year, of course, has been the most difficult. I had special thoughts for Amaris on her birthday and on the anniversary of her death. Needless to say, this has been a wrenching and traumatic experience for our entire family.

Ari, now 3, has done nicely. We have tried to be natural with him and his teachers and our friends confirm our feeling that he is well adjusted. He still talks about baby Amaris and looks at her pictures. When he sees other little infants in the park, he often mentions baby Amaris.

Judy has been courageous, but I worry for her. We have been fortunate as far as SIDS parents go, and yet I know that our loss will never be replaced. Judy has sad moments when she thinks of Amaris. We would like to have another baby, and the most important thing is for the baby to be healthy. After that if God, in his wisdom, decides to give us another girl, I am sure that we won't object. My wife and I both know what strains and pressures and doubts such a loss can cause on the family unit, and we are doing our best to keep the fiber of our family strong.

My parents have been sad but stoic. Judy's parents have been more emotional in their reaction. Judy's mother can't look at the baby's picture or walk into a children's clothing store without crying. A visit to Amaris' gravesite is particularly painful.

I speak for my wife and myself when I say how grateful we are for the happy year that we spent with our baby. But I cannot help but reflect on what she might have been. Imagine the collective loss of human potential. When a planeload of Vietnamese orphans was brought to California, major headlines were produced. And yet in California between 400 and 500 infants die each year of sudden infant death syndrome and so little attention is paid to that fact.

We harness our genius when we are threatened by the loss of other resources in our country. But I still believe our children are our greatest natural resource and that we should harness our genius on their behalf.

I am not in the best position to measure all the effects Amaris' death has had on us. For the 1 year, it seemed as if the sunshine had gone out of the day and springtime had been taken out of the year.

However, for me to appear here tonight is both a sad and happy occasion. I am sad that our baby died, but I am happy for her memory. I am sad that I have to talk about some of these things, but I am pleased to have an opportunity to represent the parents, some of whom are unable to speak of their loss.

I am happy that there is hope and that we are able to help. If a cure and prevention can be found for this disease, and if proper counseling and comfort can be given to the parents and families until that cure is found, then the lives of Amaris and the other babies will have meaning that transcends their brief time on earth.

Thank you.

Senator CRANSTON. Thank you. I find it hard to respond. Your testimony is helpful and constructive, and as forceful as any we will have. We can use it on those who object to the money we need. You are very courageous to come here tonight, and we thank you.

Mr. SCHAEFER. Thank you, sir.

Ms. SZYBIST. Senator Cranston, I think we needed Philip to put things in perspective, and I think, very clearly. It is early to deal with a disease in numbers, statistics and data, but I think Philip has put it where it belongs.

I am privileged to represent the National SIDS Foundation, and it will also be my privilege for you to make a very brief synopsis of my written testimony in the interest of time.

I would like to state very clearly that the National SIDS Foundation is most appreciative to the U.S. Senate for what one of our members called "prodding," but for your deep and abiding interest in increasing the recent funding levels for research in the sudden infant death syndrome.

We would also like to recognize and show strong support and praise for the programs in the National Institutes of Child Health and Human Development.

Earlier Dr. Hasselmeyer talked about producing quality research, and we would concur that, indeed, department quality research does come from them. Parents put many pressures on the U.S. Congress to produce research, but I think there's a difference between good research and just research.

I think, instead, we are looking tonight at Public Law 93–270, and we're not looking at the research funding which comes out of the NICHHD project, but rather out of Public Law 93–270, which it is our understanding the spirit and intent was to provide services for the families. I think what you looked at earlier is what kinds of programs were devised.

The Foundation asked its members in the 52 chapters across the country, and the various affiliates, was, indeed, that law working? And as an attachment to our testimony, for your record, you have our State-by-State evaluation of each one of those States where, indeed, we feel things are happening and where things are not.

This is a very brief synopsis. We found 12 States with good, consistent services for families provided to the general total population, 6 States that were covering over 90 percent of their population, 25 States covering approximately half, and 7 States in which we did not find consistent enough activity to measure it in any other terms except "almost none."

Not all of those States, of course, have Federal projects funding in them.

Very briefly, our evaluation of those States was taken not only by the four-point program which I believe has been reiterated here tonight, in terms of the postmortem examination, the use of SIDS on death certificates, notification to the families, and the provision of information and availability of counseling.

I would simply like to note here that the Foundation knows families have other needs, but we see those as of foremost importance.

I would like to also note for your record that we use the term "informational counseling" as not counseling. We see counseling as being considered a therapy process and the initial intent of the law was to provide informational counseling.

I would like to identify for you at this time the fact that I am not only a health professional and organizationally involved with this organization, but I am also the parent of a SIDS child. I can see both sides of the coin. I can see parental involvement, I can see the voluntary aspects, I can see the usefulness of parents where families are concerned, and I can also see some other very important things.

One, without medical examiners and coroners, you cannot provide services for families. That is, indeed, the very basis. If you don't have it, you don't have a program. We have some beautiful people, and we have some beautiful statewide medical examiner systems, and where you see that happening you will find a good program.

You also have States very much like mine in Illinois, with 101 counties, one medical examiner system in Cook County, and the other 100 counties have an autonomous elected coroner. If you are to create a program in Illinois, then you must go county-by-county, and I don't think there is any legislation at the moment that you have currently to change that.

When we set up the program in northeastern Illinois it meant clearly generating the support of all of those coroners, and, if one lost an election, going back and generating that support from someone new. And when you see lack of autopsies among your Federal projects, you will find they run into those very same kinds of problems.

We would concur, that the most successful programs in the country are those that do integrate the best of what was available before and what is available now, and that would be the volunteer groups and other health professionals. But we feel very strongly that Public Law 93-270 is working, that half the population of this country are receiving services that were not received in 1972, and in 1974, before the implementation of the law.

We would concur that while parents can help other parents, that not all parents can help parents, and that not all health professionals are good with parents. So each project success has to be evaluated on the human being within it.

We would agree, that we need more supervision from HEW and the Office of Maternal and Child Health. This is not a criticism leveled at the individual, but I almost choked when Dr. Marshall said they did not need increased staff. I would disagree. I think from the Federal projects we hear continuous requests for assistance, continuous requests for input and not duplicative services that had been created in another project, and there are not enough man-hours in the Office of Maternal and Child Health, whether you want to list them in man-years or whatever. I'm not sure how they have managed as well as they have at this point.

The National SIDS Foundation does not believe that statewide programs are always the answer to every program for families. And please understand, a program is one we consider will stick around and stay, not just something good that somebody does sporadically here and there, but a real working program. And it takes staff people to do it.

If we could have done it ourselves, we would have, but we couldn't. And so we came to you, the U.S. Senate, the U.S. Congress, and what we do have now are the projects—and we do see many of them as very successful and very committed. We see some that are not, and again, we get back to the human beings.

So what we would like is a reauthorization of the law, not for the next 3 years, but for the next 5 years. We would like to see in that period of time some changes, where indeed the voluntary health organizations can be more involved with HEW, where we have a partnership, if you would, a marriage, where we both come in a spirit of compromise, where we both, indeed, combine the spirit and best of volunteerism and the best of professionalism.

We would like to see programs that meet the needs of States in terms of large urban areas and in terms of covering lesser populated areas.

If I may just use my own area as an example, the city of Chicago has never considered itself a part of Illinois, and I don't think a statewide program could work under that kind of context. As a matter of fact, sometimes we don't belong to Cook County. And New York City might fall under that same umbrella.

So in the next 5 years, what we would like to see are 3 years of continuous maintenance of those programs, because it isn't enough to do it once; one has to continuously maintain.

We would like to see development of the areas where there are no current projects. We would like to see redevelopment of the areas where there are less effective programs. We would then like to see the last 2 years of those 5 years be a transition period, where HEW accepts the responsibility for a transition into either statewide programs, combination regional programs, or whatever, but where the program does not suddenly come to an abrupt and grinding halt, creating fear and panic among those programs already initiated in the United States.

I would ask this in the interest of SIDS families, too. If you were to remove the funding from this law tomorrow, you would delete services to 300 families who reside in my area. You might also antagonize the U.S. taxpayer, of whom I am one, for using your money in setting up a program that got dumped overnight when the law expired. So we would like to see built into the law a continuation, some methodology to really take a look at what is going to happen when the law ends so that we don't all panic.

As part of the overall recommendation, we see that an increased appropriation is the only way that one can effectively handle it.

We would say that where Public Law 93-270 is right now, it is really the commitment of human beings, of the voluntary organizations or from the health professionals and also from the U.S. Congress. We don't ask for this for any other reason, but it is simply for people like Philip and for people among our organization and the parents who are here tonight.

Thank you.

Senator CRANSTON. Thank you very much again for your very helpful testimony.

[The prepared statement of Ms. Szybist and additional information follow:]

. . . in the belief that
every child should live

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HEARINGS ON PUBLIC LAW 93-270
THE SUDDEN INFANT DEATH SYNDROME ACT OF 1974

U.S. SENATE
SUBCOMMITTEE ON CHILD AND HUMAN DEVELOPMENT
COMMITTEE ON HUMAN RESOURCES

MARCH 1, 1978
DIRKSEN BUILDING
WASHINGTON, D.C.

TESTIMONY

CAROLYN SZYBIST, R.N.
EXECUTIVE DIRECTOR
NATIONAL SIDS FOUNDATION
CHICAGO, ILLINOIS

It is my privilege to represent the National SIDS Foundation at this hearing on PL 93-270. Our national membership, which touches on every State in this country, acknowledges with appreciation the continued concern of this Committee and the U.S. Senate for the lives of children and their families. Your recent support in increasing the funding for research on SIDS provided the hope and reassurance for all parents that someday SIDS may be eradicated. That is the primary goal for us all.

Our membership also wishes to acknowledge their strong support and praise for the programs and research for SIDS conducted by the National Institutes of Child Health and Human Development. We recognize, with them, the difference between providing good research and just research. Their scientific criteria and willingness to look at all aspects of the potential causes of SIDS, not just current popular theories, has been noteworthy.

We all know how much easier it is to talk about the hopeful aspects of research and potential prevention, and how much easier it is to gain community and national support for that aspect. But the fact remains that babies do die and are continuing to die of this entity we call the Sudden Infant Death Syndrome. So we invest our future hopes in our researchers for how long that continues to happen. And we invest our present hopes in assisting those families whose babies die, creating a more humane and dignified climate for this tragedy that we cannot yet prevent. And that is our purpose here tonight. To look at the law, PL 93-270, The Sudden Infant Death Syndrome Act of 1974. To look at it from three basic aspects: 1) Is it doing what it was intended to do? 2) Could it be done better? and 3) Should it continue to be done?

It isn't enough to talk about where the programs for families have been set up, how much money has been provided to do that or how many pieces of literature have been printed and distributed. We need to ask, is it working? Not for the people who manage the programs, but for the people who are being served. The people who lose children to SIDS.

The Foundation maintains 52 chartered Chapters in the U.S. and a nearly equal number of affiliates who may represent individuals or groups of parents and professionals in U.S. communities. They provide us with continuous feedback of what is happening for SIDS. It isn't enough to just ask them. Our membership is not composed of SIDS parents alone. We do not believe that people who lose children to SIDS should join, or need to join, an organized group relating to this cause. So we also obtain our information from individuals served by SIDS programs but who do not join with us. They are the people that PL 93-270 was created for.

Our feedback comes from communities where there are federal grant Projects, no federal grant Projects, independently organized programs for families under contractual work by the National SIDS Foundation, programs for families initiated through the efforts of the voluntary organizations for SIDS, and areas where there are no programs at all.

We consider an adequate program for SIDS one that contains four basic elements directed toward individual family needs and the fifth element of education and public awareness. The four elements have been described in the past, but are briefly:

1) the establishment of the cause of death, preferably through a postmortem examination supervised or done by a qualified pathologist.

2) ~~the certification of SIDS on death certificates, where appropriate.~~

3) the notification of the cause of death to the family within a reasonable period of time, preferably within 24-48 hours.

4) providing information on SIDS to families, with the availability of informational counseling that is medically supervised.

While families have expressed other important needs, those four elements are our working criteria for a program for SIDS families.

As an attachment to this testimony, we have prepared a State by State review of what we see currently happening for SIDS families at this point in time. It indicates that a lot of good has been accomplished but that there is much more to be done. Twelve States have consistent good services for families provided to their general total population. Six States cover over 90% of their population. Twenty-five States have programs that serve parts of their states which includes approximately half of those total populations. Seven States show sporadic, inconsistent activity that we measure as "almost none" in terms of organized activity.

Considering where we were when this Committee held a hearing on SIDS in January of 1972, this is a tremendous achievement.

It isn't easy to set up programs for families. Where the most has been accomplished, we see some real reasons for success. Areas that work well have good cooperation and involvement from their Medical Examiners and Coroners. This is obviously imperative to a good program. Without it, the program doesn't work. Because of our medical/legal differences from county to county and state to state, it takes a lot of man hours to reach these individuals, especially where there are autonomous county medical/legal systems.

Just providing money to an area doesn't necessarily make a program work. The National SIDS Foundation has had two federal contracts to mobilize communities for SIDS programs (NIMH Contract, 1974-76, and MCH Contract 1976-78). We know what it takes to identify the right people and put them together for a potential working program. Almost all of the currently operating federal Projects and working programs have evolved from that contract work. Recently, in a meeting at HEW, we heard that group of committed local individuals defined as a "critical" mass. Indeed, that may be what they are, for they are the people who ensure that a program will continue to work in the areas where they reside. We've seen that "critical" mass be a SIDS parent, a parent group, health professionals, community leaders, etc. But one must exist or the program doesn't.

Successful programs are also those that integrate the best of what is available in that community, including the voluntary groups. I have never questioned the fact that some of the membership of my organization knows as much about education and setting up programs as anyone. When these individuals are utilized effectively within federal programs, we see good results. When they are not, we see less effective results. We also see waste in duplication of human and financial resources and less effective things happening for families.

In areas where there are good programs, success is measured by the fact that families who lose children do not see themselves as having been through a program, but having been helped in a routine community system. And we are seeing differences in them from our families in the past. They are less angry and they are less inclined to come to the voluntary organizations. Our mail is filled with less pain and more requests for current information. Certainly these families have problems, and clearly they grieve, but in a more dignified climate. When you ask them how they feel about PL 93-270, they don't know what you're talking about. That is the true spectacular success and achievement of this law and the programs.

It is our sense that PL 93-270 is beginning to do what it was designed to do, but it needs more time to do it more effectively.

Our recommendations for making it better basically include: 1) better use of the current talents that exist for setting up and maintaining programs, which would create some minor word changes in Part C, Section 1121, Subsection 1 (those changes submitted earlier), 2) flexibility of program format without an abrupt movement into statewide programs where they may be unworkable at present, 3) acknowledging that major metropolitan areas may need their own programs because of population size, 4) looking at the successful programs and learning from them and 5) more effective administration within the Office of Maternal and Child Health that allows for the manhours needed to provide the programs with adequate supervision and assistance.

We have two general criticisms. 1) The law was created to remove the stigma from SIDS families. It now has a reverse affect when involving program planning and overall efforts on all levels. This includes those individuals who are identified with voluntary groups for SIDS but are not SIDS parents. 2) The current evaluation program of the federal effort has been contracted to a private, profit-making business. Our membership supports the evaluation process but not the contractual methodology.

We believe the law should continue and that it is too early in it's implementation to be allowed to expire or move into a new administrative mechanism.

We recommend that PL 93-270 be reauthorized for a period of the next five years. That the next three years of that reauthorization address itself to the maintenance of the good programs, the redevelopment of the less effective programs and the establishment of programs where none currently exist. With that recommendation comes the mandate for maintenance services for communities not funded as grant Projects under the law. We ask that programs be available and maintained for all families, not just some. We recommend that the last two years of the five year period address itself to the administrative task within HEW of the orderly transition of those programs into whatever mechanism is deemed appropriate for their maintenance. We know we don't need to remind the U.S.

Congress of how much the U.S. taxpayer dislikes seeing useful programs set up with their money and then dropped over night when a law expires. So we make this recommendation in the best interests of SIDS families.

And as a part of that overall recommendation, we ask that the appropriation authorization limits be realistic for the task at hand.

Many people have participated in the creation and implementation of this law. PL 93-270, where it has been successful, is truly a testimony to the human endeavor and commitment of individuals from the highest to lowest level of that activity.

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TESTIMONY ATTACHMENT, National SIDS Foundation

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Prepared for:

Hearings on Public Law 93-270
Subcommittee on Child and Human Development
Committee on Human Resources, United States Senate

March 1, 1978
Dirksen Senate Office Building
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STATE BY STATE REVIEW OF SIDS ACTIVITY RELATING TO P.L. 93-270

STATE BY STATE REVIEW OF SIDS ACTIVITY AS IT RELATES TO P.L. 93-270

Terminology Explanation:

1. Grant Project: Refers to grant funding from appropriations provided under P.L. 93-270 to institutions and agencies that can provide programs to assist SIDS families.

2. Services for SIDS Families: Sometimes referred to as the Management of SIDS or the Four Point Program for SIDS. This includes:

    1. Identification of the deceased infant as an SIDS case through post-mortem (autopsy) examination supervised by a qualified pathologist.
    2. Appropriate certification of that death on a death certificate utilizing the term, Sudden Infant Death Syndrome as a Primary cause of death.
    3. Notification to the family of the cause of death within a reasonable period of time, preferably 24 to 48 hours following the death. Notification should come from an agency that has professional or medical/legal credibility.
    4. Information and counseling is available to the family by a knowledgeable individual, preferably a health professional or professionally supervised individual.

3. Estimated SIDS deaths are based on 1976 data from the National Center for Health Statistics. Calculated at 2.0 SIDS deaths per 1000 live births.

NSIDSF
3/1/78

Alabama: Estimated Annual SIDS incidence: 115

Federally funded grant project serving Mobile, and eight counties in South West Alabama. Project generally provides good services to families in area served. Has provided some educational outreach into other areas of the state. Very few services exist for families in other areas of state. NSIDSF Contract Work initiated a program in Jefferson County (Birmingham) in the Northern part of the state. Area will need more assistance for continuation, and potential expansion. There is expressed interest for this program on the part of the new State Director for MCH.

Alaska: Estimated Annual SIDS incidence: 16

No Federal Project Funds. Through the efforts of committed individuals in the State Health Department and from the Anchorage community (with assistance from NSIDSF Contract Work), full services for families have been implemented and maintained in the greater Anchorage area, and extended to other population centers of the State. Most of State Population area covered.

Arizona: Estimated Annual SIDS incidence: 80

No Federal Project Funds. NSIDSF Contract Work has assisted with setting up full services for families in Maricopa County (Phoenix). Approxiately half of the state's population resides in this area. Early contract work established full services for families in the Tucson area, which continue on a reasonably good, but inconsistent basis. Approximately one quarter of the States's population receive little, if any, assistance.

Arkansas: Estimated Annual SIDS incidence: 66

State Wide Federally Funded Project. Program appears to be providing services to families. NSIDSF has little intercommunication with this Project although repeated attempts have been made.

California: Estimated Annual SIDS incidence: 662

State Wide Federally Funded Project. Original project design was excellent on paper. Problems have existed because of size of state, state population and staffing limitations. Primary emphasis has been on educational outreach activity. Full services to families are inconsistent throughout State. They are seen as very good in Los Angeles County, San Diego County, San Mateo County, Alameda County, Marin County, and Yolo County. There are other

Counties with good, but sometimes inconsistent services for SIDS Families. The majority of the good service programs and their success is attributed to the agencies and community groups in those areas. For example, Los Angeles County established a full service program for SIDS prior to PL93-270. Much of the rest of the population of the State continues to receive limited assistance.

Colorado: Estimated Annual SIDS incidence: 82

State Wide Federally Funded Project. Full services for families has been implemented in four counties in the Denver area. Management of families in that area is seen as very good. Project subsidizes autopsies. Thirty-eight Regional Coordinators have been trained to counsel families and establish management standards state-wide. Difficulties appear in identification of SIDS infants, and reporting. Currently only one-fourth of the State receives full services for families.

Connecticut: Estimated Annual SIDS incidence: 69

State Wide Federally Funded Project. Very good services for families have been established state wide. Educational outreach activity established, and good cooperative efforts seen between Project and Voluntary groups.

Delaware: Estimated Annual SIDS incidence: 16

No Federally Funded Project. Services for families are inconsistent, sporadic. MCH Director is interested in program, including more structured programmatical assistance.

Florida: Estimated Annual SIDS incidence: 209

State Wide Federally Funded Project. Services for families provided state wide. Judged as an excellent program. Very real commitment on part of project personnel. Target areas established, parent-to-parent programs initiated, public health nurses trained, good communication with others, good utilization of community resources. A mechanism for assisting families has been established that would suffer without funds, but could continue in part.

Georgia: Estimated Annual SIDS incidence: 160

No Federal Project Funds. Services for families established for Metro Atlanta area through NSIDSF Contract. Educational activity expanding into other areas. Services for families also exist in Augusta, (Southeast) established by voluntary local group. Excellent cooperation from State Health Department. Coroner's have local jurisdiction, many do not make referrals. For this reason, a state wide program will require efforts county by county in other areas of the State.

Hawaii:

Estimated Annual SIDS incidence: 32

No Federal Project Funds. Individuals from the University of Hawaii, Children's Hospital, Diamondhead Mental Health Center, other agencies and community members are implementing full services for families on the Island of Oahu. Support and assistance was supplied via NSIDSF Contract. The program will expand to the outer islands by January 1, 1979. This represents a dramatic change in SIDS management there in less than one year.

Idaho:

Estimated Annual SIDS incidence: 33

Ten Counties of Northern Idaho Served by Spokane Project. Some educational activity has taken place but services to families are limited, and inconsistent.

Southern Idaho. Boise--Coroner interested, and cooperative. Autopsies done and information to families provided. Assistance in training and maintenance of service giving agencies needed.

Idaho Falls. Some services to families provided on an inconsistent basis.

Illinois:

Estimated Annual SIDS incidence: 335

Two Federally Funded Projects Covering Total State.

Loyola Project. Serves nine northeastern counties. Includes the Greater Chicago area, and Lake County, Indiana. Covers approximately two-thirds of population of Illinois. Very good servies to families provided with good integration of other agencies. Education outreach, and cooperative efforts.

Springfield Project. Serves remainder of Illinois Counties. Geography, and local coroner jurisdiction remains handicap for good services to families. Some educational outreach activity. Full services for families provided in Champaign-Urbana area, and some other urban areas. Services state wide are sporadic, and inconsistent.

Indiana:

Estimated Annual SIDS incidence: 1o0

No Federal Project Funds. Exception, Lake County, Indiana. Sporadic, inconsistent services there. Major community interest gaining. Full services should be forthcoming by summer. State Health Department interest for State Wide Program becoming evident. NSIDSF Contract Work and Voluntary group activity in coordination with Health Department currently underway. Services for families inconsistent and frequently non-existent at this point.

Iowa:

Estimated Annual SIDS incidence: 82

Federally Funded State Wide Project. Activity has been primarily directed at educational outreach and community level training programs. Full services for families are currently operable for approximately One-fifth of the population because of Medical Examiner cooperation and voluntary agencies. Better cooperation in obtaining autopsies, certification, reporting, and coordinating services seen as necessary. Legislation that would provide state funding for autopsies, and full SIDS management standards currently pending.

Kansas: Estimated Annual SIDS incidence: 67

No Federal Project Funds. Educational outreach activity with emphasis on management standards has occured via NSIDSF Contract activity and voluntary groups in the more populated areas. Currently, one-half of the states population has excellent services for families in such areas as Greater Kansas City, Topeka, and Wichita. Nucleus groups have been formed in those areas to insure program maintenance. Excellent cooperation from the State Health Department. The success of further efforts in Kansas is ensured by a State Health Director who believes in community-oriented programs and working towards that end.

Kentucky: Estimated Annual SIDS incidence: 113

Newly Funded Federal Project, State Wide. Previous NSIDSF Contract Work and a committed state agency should ensure good full services to families.

Louisiana: Estimated Annual SIDS incidence: 138

No Current Federal Project Funds. Project in New Orleans area discontinued after two years because of ineffectiveness. Full services to families established prior to PL93-270 that were disrupted by Project. Services currently being reestablished by local voluntary group, and NSIDSF Contract Work. State Public Health Department is interested, and has promised to help towards a state wide program as mandated by a state law passed in 1975.

Maine: Estimated Annual SIDS incidence: 29

No Federal Project Funds. Autopsies generally done. Full services for families are inconsistent. Informational counseling for families being implemented currently by State Health Department, with a coordinator appointed by the State MCH Director. Training for service providers and related agencies will be required. Efforts addressed towards community programs. NSIDSF Contract Work is assisting.

Maryland: Estimated Annual SIDS incidence: 91

Federal Project Serving 90% of State Population. Effective and cooperative State wide Medical Examiner's System. Full services to families judged as very good in areas that Project serves. Good educational outreach.

Massachusetts: Estimated Annual SIDS incidence: 137

Federally Funded Project. Project currently covers Eastern Massachusetts. Autopsies generally done and full services to families seen as very good in this area. Educational outreach being done. Western Massachusetts (west of Worchester) has inconsistent and sometimes non-existent services for families. State Bureau of Vital Statistics reports almost no SIDS incidence in Western Massachusetts which probably reflects on the certification of cases. Massachusetts has multiple, autonomous Medical Examiners systems and health departments. Full services for families will require extensive coordination and time. Some educational activity done under NSIDSF Contract in early 1977.

Michigan: Estimated Annual SIDS incidence: 260

Federal Project Funds. Excellent, full services for families occur in Wayne County (Detroit) where Project is located and has primary responsibility. Efforts being made to extend into other areas of the State. Good interest on part of State Health Department in the past with training programs for service providers. Some of this activity continues across the State but in inconsistent patterns. Full services occur in Grand Rapids through assistance of local voluntary group. The four western counties of the Upper Peninsula are being served by health professionals in Green Bay, Wisc. A state law passed in 1974 providing autopsy funding is currently being revised to be more effective. Project personnell working with local groups effectively to coordinate activity and programs.

Minnesota: Estimated Annual SIDS incidence: 113

State Wide Federally Funded Project. Very good full services provided to families, particularly in the Minneapolis/St. Paul area. Good educational outreach activity. Some inconsistency of services to families in lesser populated areas of the State.

Mississippi: Estimated Annual SIDS incidence: 84

No Federal Project Funds. With the exception of Jackson, Mississippi area, SIDS is not routinely used on death certificates and autopsies are not routinely performed. Lack of knowledge and/or cooperation of many Coroners in this State has been the assigned reason that interested health professionals lose impetus in programs for SIDS families. Mississippi has an excellent program for high risk infants but do not include SIDS in this activity. Lack of funding has made SIDS appear to be a low priority within the State Health Department along with difficulties in identification and reporting of cases. There has been limited interest in the past in requesting funds for programs. Some educational outreach activity has taken place. Will require a concerted effort, and a county by county educational outreach to change the current management of SIDS in this State. There is some interest within the Health Department that will hopefully change this in the current year.

Missouri: Estimated Annual SIDS incidence: 141

Federally Funded Project in Greater St. Louis Area. This Project serves the five counties comprising Greater St. Louis. Full services for families are excellent in St. Louis City and County, where the full cooperation of the Medical Examiner exists. There are no consistent services in counties outside that area because of inconsistent autopsies, certification and referrals. Good educational outreach activity by Project with good integration with existing agencies. Good services for families exist in the three counties encompassing Kansas City, Missouri. These were implemented under NSIDSF Contract Work, local voluntary groups and the excellent cooperation and support of involved county officials. Under NSIDSF Contract Work, a Missouri SIDS Committee has been formed representing State Health officials, parents, health professionals, community and state leaders who are utilizing legislative efforts as the primary tool for effecting good services for families in the rest of the State. That legislation is currently pending. One half of the total population of Missouri has adequate services for SIDS families.

Montana: Estimated Annual SIDS incidence: 24

Eight Counties of Western Montana served by Spokane Federally Funded Project. Good services for families are generally inconsistent although autopsies are routinely done. Some educational activity. Local involvement is gaining momentum in working towards full services for SIDS families. In general, Montana has sporadic, inconsistent services for SIDS families.

Nebraska: Estimated Annual SIDS incidence: 48

Two federally funded projects were in effect in the first funding year (1975-76). During that time, 68 cases were reported with an autopsy rate on 74% of the potential SIDS population. Funding was terminated from both programs after one year. In 1977, only 22 SIDS cases were reported for the State with 20 of those from Douglas County (Omaha) where activity was continued under the NSIDSF Contract. Some private funding has been obtained through the NSIDSF to enable state-wide training programs for counselors for SIDS families. Services for families currently exist in the four major counties of Nebraska which includes approximately one half of the State population. Very few services exist in the rest of the State at this time. Currently, legislation which would facilitate a state wide program is pending. The bill has state wide support and no apparent opposition.

Nevada: Estimated Annual SIDS incidence: 19

No Federal Project Funds. Excellent full services for families are rendered to families in Clark County (Las Vegas) where approximately two thirds of the state population resides. Good services are also provided to families in Washoe County (Reno), which means almost 95% of the population is provided for. This was facilitated through NSIDSF Contract work and the commitment of key individuals within the local agencies.

New Hampshire: Estimated Annual SIDS incidence: 22

State Wide Federally Funded Project. Good services for families provided for the past two years. State also has legislation providing for SIDS Management Program that is considered model legislation.

New Jersey: Estimated Annual SIDS incidence: 175

State Wide Federally Funded Project. Project is providing good services to families on a state wide basis and excellent services in the northern part of the State. Good integration with other agencies and good educational outreach.

New Mexico: Estimated Annual SIDS incidence: 44

State Wide Federally Funded Project. Full services provided for families by this Project that have been considered superior and comprehensive. The individuals involved are committed and serve the entire state well.

New York: Estimated Annual SIDS incidence: 471

Three Federally Funded Projects Serving Parts of New York.

New York City Project. Provides excellent services to families under difficult circumstances.
Long Island Project. Provides excellent services to families.
Genessee Valley Project (Rochester). Provides excellent services to families.

All projects appear to be doing good educational outreach in communities served.

Portions of New York State are not served by federally funded projects. Services for families aresporadic and inconsistent. Some services are provided in the Albany area with voluntary and health professional involvement. Difficulties with referrals and case identification. Educational outreach done in Albany, Binghamton and Buffalo. More effort needed here.

North Carolina: Estimated Annual SIDS incidence: 160

State Wide Federally Funded Project. Provide very good services to families. Good integration of health agencies and voluntary groups. Good educational outreach.

North Dakota: Estimated Annual SIDS incidence: 22

No Federal Project Funds. Comprehensive program effected in North Dakota through passage of State Senate Bill 2101 on March 1, 1977. Legislation provides for payment for autopsies and a part time coordinator to effect a state wide program for families. Also includes educational funding. SIDS seen as a priority by the State Director of MCH. Educational activity and assistance provided by NSIDSF Contract Work.

Ohio: Estimated Annual SIDS incidence: 307

State Wide Federally Funded Project. Good educational outreach activity. Full services for families inconsistent throughout state. Project is gaining recent momentum in working towards the provision of good services state wide.

Oklahoma: Estimated Annual SIDS incidence: 84

No Federal Project Funds. Has a State wide Medical Examiner's System which is cooperative. There is a good working relationship being established with the Health Department. A loose, but workable program that provides most services for families has been established throughout the State with impetus from health professionals and community groups working together. Will need assistance, time and training programs to create a more permanent system. Assistance provided through NSIDSF Contract Work.

Oregon: Estimated Annual SIDS incidence: 71

No Federal Project Funds. Oregon maintained a model program for services to SIDS families for quite sometime due to commitment of individuals within the state-wide Medical Examiner's office. State funding provided training for service providers several years ago but with the cessation of that funding, full services for families has deteriorated. Autopsies performed and deaths appropriately certified. Follow-up services are inconsistent. Good interest in State Health Department. NSIDSF Contract Work to provide temporary assistance in reinitiating training programs.

Pennsylvania: Estimated Annual SIDS incidence: 298

Federally Funded Project In Philadelphia and Eastern Pennsylvania. Provides very good full services to families in areas served. Has plans to extend services. Provides good educational outreach.
NSIDSF Contract Work initiated in Western Pennsylvania, primarily in Pittsburgh and Erie areas. Good cooperation with Medical Examiner and good community stimulation. Contract work will implement training programs for full services for families in those areas.

Rhode Island: Estimated Annual SIDS incidence: 22

State Wide Federally Funded Project. Provide very good services to families. Good educational outreach.

South Carolina: Estimated Annual SIDS incidence: 93

No Federal Project Funds. Through NSIDSF Contract Work, a state wide system for full services for families is being established. Strong interest in the State Health Department was key to this activity. State will need some continued assistance with education and training for service providers.

South Dakota: Estimated Annual SIDS incidence: 22

Federally Funded Project awarded 1/1/78 for State Wide Program. Prior NSIDSF Contract Work created full services for families in Sioux Falls and Rapid City (approximately one quarter of state population.) Funding will allow for the extension of services statewide and the maintenance of current services.

Tennessee: Estimated Annual SIDS incidence: 130

No Federal Project Funds. A federally funded program did exist for two years as a county program in the Nashville area. Funds were discontinued in 1977. In Memphis, Nashville and a few urban areas, autopsies are performed and SIDS is used on death certificates. Little happens after that. In Memphis, the Health Department is willing to be involved but cannot get routine referrals. State Health Department has been reluctant to commit themselves to programs for SIDS.

Texas: Estimated Annual SIDS incidence: 453

Federal Project Funds in Houston Area. Provide excellent full services to families in area served. Provide good educational outreach.
Federally Funded Project in Dallas area was just recently funded. Too soon to evaluate.
Texas does have state wide legislation passed in 1977 that provides for a state wide system for SIDS programs, but it does not provide funding nor a mechanism for implementation.
Programs for families outside of the Houston area are inconsistent. They may be good where local efforts have insured a good program, but that activity is sporadic. Multiple programs may be necessary in Texas because of geography and an interesting medical/legal system carried out through the Justice of the Peace, in many areas.

Utah: Estimated Annual SIDS incidence: 28

State Wide Federally Funded Project. Project provides very good, consistent full services for families. Good educational outreach.

Vermont: Estimated Annual SIDS incidence: 13

State Wide Federally Funded Project. Project provides good family services. There is some resistance to this program by the general population, but not by the families served. Good educational activity done, more is probably needed.

Virginia: Estimated Annual SIDS incidence: 134

No Federal Project Funds. No full services appear to exist within the State. The Chief Medical Examiner of Northern Virginia provides good autopsies and utilizes SIDS on death certificates. Through local voluntary agencies some hospitals do provide interim counseling, but this is inconsisent and sporadic. Autopsies and appropriate certification also occurs in Roanoke areas and Norfolk/Newport News areas. Again, follow up may be inconsisent or non-existent Good components to full services exist. Needs further effort to tie together into a consistent program, possibly a state wide system.

Washington: Estimated Annual SIDS incidence: 99

Two Federally Funded Projects for State Wide Coverage.
Seattle Project covers 22 western counties of the State. Project seen as excellent and very successful. Full services provided to areas served with good integration with other agencies. Good educational outreach.
Spokane Project covers 17 counties in eastern part of state, parts of Idaho and Montana. Educational activities provided but services to families seen as inconsistent.

West Virginia: Estimated Annual SIDS incidence: 56

No Federal Project Funds. A state wide medical examiners system exists. A full service program for families was implemented in 1975-76 through NSIDSF Contract work linking up the M.E. system with the Mental Health Department. Would appear to be working with most services being rendered to families.

Wisconsin: Estimated Annual SIDS incidence: 130

No Federal Project Funds. Good interest generated in State Health Department. Many attempts have been made to create full service programs in Madison and Milwaukee, in addition to other areas. Committed and interested health professionals have participated in those efforts. Full services do currently exist in the Green Bay area, coordinated through a local hospital. Current interest involved in creating a state wide system and an application for federal funds. State legislation for full program services currently pending. Problem areas have been primarily in autopsies and reporting, in addition to tying in reporting with service providers. NSIDSF Contract Work assisting. Wisconsin appears ready for a state wide program which will require time but is possible.

Wyoming: Estimated Annual SIDS incidence: 13

No Federal Project Funds. Through educational programs directed to Coroner's, physicians and emergency personnel, comprehensive services for families now exist in the six most populated areas of Wyoming, with the program available state wide. The State Health Department has designated SIDS a high priority and coordinate the follow up services. The Funeral Directors (which represent the Coroners) has been extremely cooperative. NSIDSF Contract Work.

Washington, D.C.: Estimated Annual SIDS incidence: 37

No Federal Project Funds. SIDS cases are autopsied and referred for follow up services to one individual. Services are inconsistent. Educational activity was initiated with NSIDSF Contract work. This is an area with special problems. Will probably need grant support or financial funding to coordinate a good, full service program with adequate training and staffing.

Senator **Cranston**. On page 5 of your testimony you expressed your opposition to HEW's contracting with a private, for-profit corporation on evaluation of the SIDS effort. What's your reason for that?

Ms. **Szybist**. What you have is a representative consensus from our entire membership that has been expressed in writing, that the evaluation contract should not go to a profitmaking business when there are existing, among the university and medical school systems, nonprofit organizations, people who could have done the same work and could have utilized what they learned to continue the programs for sudden infant death syndrome.

Instead, we see a company that has utilized staff time from three Federal projects excessively, staff time within the Office of Maternal and Child Health, to even learn about sudden infant death syndrome, and we see nothing good happening from that.

It was our understanding that HEW's hands were tied in the use of this, where there's some law which created a need for making this evaluation contract go to a profitmaking minority business.

Senator **Cranston**. You're rather unique to be a witness who favors the program, but suggests perhaps it should be phased out in time, as far as Federal support goes.

Do you really believe the SIDS program can develop enough support within the community to be able to be totally community supported?

Ms. **Szybist**. No. Would you like an expansion on that answer, or is that honest enough?

Senator **Cranston**. You indicate you feel more effective administration is needed at the Federal level to provide the programs with more adequate supervision and assistance. What sort of assistance do you believe is needed, beyond what it now is?

Ms. **Szybist**. It is my understanding that this last August they were funding a supervisory position for someone in the SIDS program 100 percent of the time. Please understand, this is not a criticism now but the manpower wasn't there when the projects were started. Implementation of the law began on July 1, 1975, and there was a lot of information available on how to start a program. But that information was not obtainable from the Office of Maternal and Child Health nor was the manpower to assist the first 21 funded programs and give them the help they needed. I felt very strongly they could have used the volunteer groups at this point, as consultants, and really dispatched us to help, if you would. But I think there was also a stigma attached to working in that way, and as a consequence we have projects right now that I'm not sure clearly understand that the four-point program is one of their mandates, and instead they are just doing excessive education.

Senator **Cranston**. I have questions to address to any one of you who feels like responding, or if any of you want to add to what has been said, please do so.

When counseling is done by parent groups, who initiates it generally—the new SIDS parent or your organization?

Mr. **Goldberg**. I would like to respond, Senator.

I can speak primarily for the situation in Baltimore, where we have a statewide medical examiner system. Prior to the establishment of the project we had a close working relationship with his office, and his office submitted names and addresses to us, and we attempted to make contact with the families, being sensitive to the needs and desires of the families. Not every family responds the same way. And those who didn't want help immediately were sent literature, if they wanted it, and those that did want help, we went out to visit or they came to us.

Each case is purely individual. I think it depends on the circumstances. You try to get a fix on the kind of family it is, what their educational level might be, where they're living, other children in the family. You can tell this by conversation, the use of words and things like that.

We have found generally—and I think it has been more or less proven—that the family that knows about SIDS ahead of time prior to the loss of their child can respond better when they do lose their baby, than when it comes as a sudden shock and surprise out of the blue. I think that's one of the reasons why the program is so helpful, because it informs the general public.

But again, in counseling parents, I agree with Carolyn, not every parent can counsel. But there are parents that have some rapport as person-to-person and can be helpful to the family. It depends on the needs of the family and how far the family wants to go in receiving that help.

Senator CRANSTON. Do you have something to add to that?

Ms. SZYBIST. Yes. When one can't get names from medical examiners and from coroners, there is inconsistency in contacting the family. There are some very dedicated people, the Goldbergs numbering among them, and people within my organization, but unfortunately, we have not found a way to duplicate them in all our communities.

We have found that sometimes volunteers could not respond. In the first year of the Loyola program, which was funded independently by the National SIDS Foundation and implemented a year before the law—so it's not Federal money, so you can take this information separately—I was able, because of the counseling staff, to utilize both parents and health professionals to counsel families. Only about 25 percent of the people in the city of Chicago would respond to a middle-class, white volunteer organization. There was a great body of people, that no matter how we tried, we couldn't get to.

We did learn later they had the same needs and we have been able to initiate parent-to-parent meetings in those communities, but we really needed to have the staff to do it.

Senator CRANSTON. Do you encounter any particular difficulties in getting names that anything should be done about, consistent with individual privacy rights?

Mr. GOLDBERG. Senator, that has been a problem in the Baltimore project. We have not gotten the names since the project started, although we were part of the project and the proposal that was approved by HEW. It is in the hands of the attorney general of the

State of Maryland, now that apparently there is some purpose to be served when the rights of privacy are handled properly in serving people and meeting people.

It seems ironic to me that hospitals can release lists of names of babies born so Gerber Baby Foods and other products can reach the home and photographs can be taken. And the State Department of Motor Vehicles releases names so you can receive other things in the mail for profit. But when it comes to serving the community in a humane way, you have difficulty in finding out who these people are who lost babies.

I will say this, that the Guild for Infant Survival had a relationship with Dr. Fisher, the Chief Medical Examiner of Maryland, to get the names as far back as 1965. He asked us to bring to his attention any objections from any family that we had no right to find out who they were.

We handled them in an appropriate way. From that date until the beginning of our project in 1975, there has never been one single complaint from any family questioning how we got their name, why we got their name, or how terrible or how inappropriate our help was. I think that track record will speak for itself, and it is unfortunate that we have to have a conflict with the rights of privacy. It is now bouncing back and forth between HEW and the State of Maryland. One said they backed up the project because the government required it, and the Government says they backed up the project because the State law required it. And still, it has been pending since, I guess, 1½ years now, and they still have not resolved the problem. So it seems to be a tacky one.

Senator CRANSTON. In States where there are federally supported SIDS projects, how do these projects coordinate counseling activities with the parent groups, or do they do so adequately?

Ms. SZYBIST. I think I need to respond to your question about the Privacy Act, because in all fairness, I would like to present our stand. The Foundation supports the Privacy Act of 1974 and how it affects information given to parent groups.

We find ourselves in support of the Privacy Act, even though, indeed, parents could receive some assistance from the voluntary groups, and we have continued to support it. We have heard complaints from both sides of the coin.

Ms. LEFEBVRE. In response to your question about parent volunteers in Philadelphia, the area for which I speak, there is a project which takes in a six-county area. The project itself is responsible for visiting, either through our visiting community health service group, or by the project personnel, all the inner-city SIDS parent victims.

We, The Pennsylvania Guild for Infant Survival, have sponsored a visiting program for many years, because we have long since recognized, about 10 years ago, through our involvement and our attempts to visit and make headway to present services to the families within the inner city, specifically in major black population sectors, that we just were not acceptable, whereas the visiting nurse was. So we hired visiting nurse services.

Now, in the other outlying counties there are parent volunteers who are contacted by the medical examiner or coroner in that county, who then relays the information and, in a coordinated effort with the SIDS project, develops a program of visitation and counseling for the family.

Senator CRANSTON. Do you all feel it's important that coverage be extended to all States that now do not have information and counseling projects?

[Affirmative response.]

Ms. LEFEBVRE. Without question.

Ms. SZYBIST. With the qualification that one knows what has to be done to initiate that.

Senator CRANSTON. That completes the questions I have, and I thank each of you very, very much for being with us. It was most helpful. And, Phil, again, your statement, I know, was very difficult for you to give.

Mr. SCHAEFER. Thank you, sir.

Senator CRANSTON. We now have the panel on SIDS Information and Counseling Projects.

Mrs. Zoe Smialek, project director for the Michigan SIDS Information and Counseling Project; Patricia Dorsa, project coordinator, New Jersey SIDS Program; and Dr. Francine Jensen, project director for the SIDS Information and Counseling Project in Houston.

Mr. Mason Johnson is appearing for Dr. Warran Hawes, director of the California SIDS Information and Counseling Project. Mr. Johnson is a member of the next panel also, and he has volunteered to represent the California SIDS agency whose director was unable to come at the last minute. It's a pleasure to have you on both panels.

Please proceed in whatever order you see fit. Again, I know how all of you feel about this, but it is important that we give everybody a chance tonight before it gets too late, so please try to be brief.

STATEMENTS OF PATRICIA DORSA, M.S.N., PROJECT COORDINATOR, NEW JERSEY SIDS PROGRAM; ZOE SMIALEK, PROJECT COORDINATOR, MICHIGAN SIDS INFORMATION AND COUNSELING PROJECT; DR. FRANCINE JENSEN, PROJECT DIRECTOR, SIDS INFORMATION AND COUNSELING PROJECT IN THE HOUSTON AREA; AND MASON H. JOHNSON, ON BEHALF OF WARREN E. HAWES, M.D., CHIEF, MATERNAL AND INFANT HEALTH SECTION, CALIFORNIA DEPARTMENT OF HEALTH, A PANEL

Mrs. DORSA. Mr. Chairman, it is my privilege to share this report dealing with New Jersey's Information and Counseling Program.

The New Jersey Sudden Infant Death Syndrome Program, since July 1976, has been providing, on a statewide basis, information and counseling to families of SIDS infants, educational programs to those who are involved with the management of SIDS experiences, and support services which contribute to the expansion of knowledge about SIDS.

In the last 1½ years the New Jersey SIDS Program has received reports of 195 families whose infant died of sudden infant death syndrome; 75 percent of these families, or 146, have received information and counseling services.

The parents of the infants with whom the program has had contact relate their feelings of appreciation for the guidance and emotional support which they have received from the program staff, the community health nurse, the parent-to-parent contact by the SIDS parent organizations, and the parent group meetings.

Parents of SIDS infants prior to July 1976, with whom the program has had contact, relate their feelings of "things would have been different for us if we had had these kinds of supportive services."

The New Jersey SIDS Program has worked toward, and seen emerge on the State medical examiner level, policy determinations which foster, one, the identification of SIDS as cause of death after gross autopsy. This eliminates, in a certain percentage of cases, that time interval which was created by a statement such as "pending microscopics or further analysis."

In New Jersey this year, 99 percent of our SIDS infants have been autopsied.

Two, submission of a corrected death certificate, when appropriate, to amend the autopsy diagnosis to SIDS from a previously stated diagnosis.

Three, the increased percentage of reports to the SIDS program by county medical examiners of infants who die from SIDS, from 52 percent in the first grant-year, to 90 percent in the present year.

And four, the prompt mailing of a letter by the State medical examiner to the parent of the SIDS infant, written in English or Spanish, of the autopsy diagnosis with an explanation of SIDS and the telephone numbers of support groups.

The New Jersey SIDS program has provided educational programs and has established relationships with 42 home health agencies throughout the State, to provide information and counseling to families of SIDS infants, by prepared community health nurses who, upon referral from the New Jersey SIDS program, visit these families in their home to provide anticipatory guidance during the crisis and emotional support on an ongoing basis, while individuals within the family learn to cope with their grief experiences.

The New Jersey SIDS Program and the New Jersey Chapter of the National SIDS Foundation jointly sponsor monthly group meetings for new SIDS parents. The meetings are moderated by a group leader who is prepared to deal with the mental health aspects of sudden infant death syndrome.

The meetings, 14 to date, give parents the opportunity to meet other parents of SIDS infants, to share their coping experiences, and to gather emotional support from others who have been there.

This activity has been so helpful to the parents that a similar endeavor is being planned between the SIDS program and the Guild for Infant Survival in New Jersey.

The community council of the New Jersey SIDS Program provides for appropriate community representation in the development and operation of the program. This year it has begun to establish a speakers bureau, which will be a joint activity between the council members, the SIDS parents organizations, and the SIDS Information and Counseling Project.

Epidemiological data regarding SIDS in New Jersey is being collected by the community health nurse during the home visits to parents of SIDS infants. The available data has been reviewed and hypotheses about SIDS in New Jersey are now being formulated. These hypotheses will be tested by collating the SIDS data in a computer system so that analysis of the data will be reliable and manageable.

The SIDS program has become aware of the following problem areas: One, instances of judgmental attitudes by police who associate child abuse or neglect with the death of an infant due to SIDS are found in the core areas of large inner cities.

Two, instances of hospital emergency rooms that make little or no environmental provision for the expression of the family's grief, and emergency room staff who are passive to the emotional needs of families in crisis.

Three, we find inequities in the SIDS information and counseling programs regarding the budget allocation of numbers of core staff approved to manage the SIDS programs. A ratio of the estimated SIDS population to staff members would seem appropriate.

Four, the lack of program priorities for SIDS families who now have a subsequent infant, the SIDS parents who have had more than one infant die of SIDS, and the SIDS parents whose SIDS infant is part of a multiple birth.

Five, the absence of program direction regarding the SIDS project's responsibilities toward the parents and physicians of "near miss," infants and of infants who will be identified at high risk to SIDS.

Six, the evolving awareness of the need for grief counseling to the family to be accepted as a legitimate health care service and cost, and for payments by third-party payers for family counseling after the death of the individual.

And, seven, the evolving awareness of the need for grief counseling to parents, all parents, to promote family adjustment after fetal, neonatal, and infant loss from any cause.

The New Jersey SIDS program suggests the following for revision and extension of Public Law 93–270.

We would like to see the program extended to continue to develop public information and professional educational materials, and that statements about SIDS as a medical entity reflect the current research findings and their probable future extensions; that pamphlets developed for public information, be written in more than the English language.

That audiovisual materials and pamphlets that are developed for public information, take into account the large, lower, socioeconomic population to whom they are given as information sources, and that perhaps on a Federal level, a formal system for the dissemination of information be developed for sending out research information to the grassroots level so that the hospital's infant and pediatric units, as well as local pediatricians' and obstetricians' offices, would have this information.

We feel reports of statistics from the projects to HEW should be mandatory and uniform, so that the epidemiological data of each project, when collated nationally, might reveal significant trends.

We want to see the funding continued and expanded to cover "near miss" babies and families who are going to need help with sleep evaluation, monitoring equipment, and counseling.

We would also like to see provided, in addition to information and counseling to families affected by SIDS, supportive services to the SIDS families with a subsequent child, and the SIDS family whose SIDS infant is part of a multiple birth, in terms of sleep evaluation and counseling, and also genetic counseling and testing for SIDS families who have more than one SIDS experience.

It is our feeling that funding should continue to be via title XI and not title V because of the title V's formula favoring rural over urban populations. Sudden infant deaths occur with greatest frequency in the urban populations.

Senator CRANSTON. Thank you.

Ms. SMIALAK. My name is Zoe Smialek, and I am the project coordinator, not director, of the Michigan Regional SIDS Center.

During the first year of our project I visited all the families within Wayne County that had lost babies to SIDS, and this accounts for approximately 48 percent of the deaths that occurred, at least that are diagnosed, in the State of Michigan—although Wayne County itself only has 27 percent of the population and 27 percent of the live births throughout the State. So we certainly have an increased incidence of the sudden infant death syndrome. In fact, the city of Detroit has a rate of 4.8 death per 1,000 live births.

We support and have implemented in Wayne County the four-point SIDS program. Unfortunately, in the other counties throughout Michigan, which function under their own medical examiners who may not be pathologists and who may not have an understanding of SIDS and the needs of SIDS families, that does not exist.

We are currently working with the State public health department to apply jointly in the next year for a statewide SIDS project. Unfortunately, we anticipate that the amount of money that will be required will be increased by at least 30 percent, and we don't know if that will be funded.

We have also recognized that certain problems still exist and all of those problems that were identified in New Jersey we have identified in Michigan. Unfortunately, the one that we find the most difficult to understand and appreciate is the physicians' misunderstanding of sudden infant death syndrome.

What we are seeing in our community is that many doctors still do not believe in SIDS and, in fact, refer to it as a "wastebasket" diagnosis and refuse to use it on death certificates. We see misinterpretation of autopsy findings, and death certificates being filled out in various inaccurate ways, such as viral pneumonia and pneumonitis without supporting history of autopsy.

Also, families in outlying counties are still waiting for undue lengths of time for autopsy reports. Occasionally families are still subjected to police harrassment.

When we examined our records for 1976, we discovered that 11 of the 106 babies that died of SIDS in Wayne County had experienced at least one episode of apnea that required stimulation or resuscitation before going on to die of SIDS. One baby experienced five such episodes accompanied by bloody froth around the nose and mouth before succumbing. Although almost all of the parents sought help for this problem, only one of the babies was subsequently investigated in a hospital, and he was sent home when he appeared in good health.

Therefore, we have also been involved with physician education in this regard.

Lastly, one additional problem that has not yet been addressed concerns the need for extensive and continuous in-service education to those personnel providing the service to families. Many public health nurses feel inadequate and uncomfortable in the role of the bereavement counselor. Public health departments must recognize that not all nurses are suited for this kind of visiting and should closely supervise the nursing intervention and the families' reactions to those visits.

I will not elaborate further here, as my written testimony has already been submitted, except to say that continued funding is imperative at this time in its present form so that SIDS projects may continue in their present form until an evaluation can take place to determine their effectiveness.

Thank you for the opportunity to testify before this committee.

[The prepared statement of Ms. Smialek follows:]

STATUS OF SUDDEN INFANT DEATH SYNDROME IN MICHIGAN AS OF FEBRUARY 1978

The Michigan Regional SIDS Center provides total and direct service to all SIDS families in Wayne County. Although the County of Wayne has only 27% of Michigan's population and 27% of Michigan's live births, it accounts for 49% of the total number of diagnosed Sudden Infant Death Syndrome cases (statistics 1976). The services provided are outlined in greater detail in enclosure #1. However, in brief they include

1. Communication with all families in Wayne County that lose a baby suddenly and unexpectedly before and after the autopsy is completed.
2. Notification of cause of death within the first 24 hours.
3. Notification of all auxillary personnel that deal with the family about the death and the nature of the disease. These personnel include family physicians, pediatricians, social workers, and protective service workers.
4. Direct follow-up counselling of SIDS families through a contracting out of services through the Detroit Health Department.
5. Monthly parent meetings are held in conjunction with the local National Sudden Infant Death Syndrome Foundation group.
6. Free consultation when requested by families outside Wayne County on the results of the autopsy examination of their child.

7. Free consultation to the Michigan Department of Public Health on the results of individual autopsies when questions arise over the validity of the results of specific individual state funded autopsies.
8. Educational programs designed for both public and professional groups, with a specific emphasis on other local public health departments who are interested in becoming involved with SIDS counselling.

The tri-county area of metropolitan Detroit includes Wayne, Oakland, and Macomb counties. These three areas are accessible to our central location and many families from outside Wayne County become involved with our center through the monthly parent meetings. We, therefore, have personal contact with more than half of the SIDS families in Michigan.

THE LAW

Currently, Act 350 (enclosure #2) states that in all cases of sudden and unexpected deaths of children less than two years of age, the state will pay for the autopsy -- if the parent requests one.

This law is not functioning as anticipated because

1. Medical examiners are not informing parents of the availability of the autopsy.
2. Some physicians, even pathologists, recommend against autopsy making inaccurate statements such as
   "What good will it do now?"
   "You won't be able to have an open casket."
   "I'll sign the death certificate 'heart disease', so that you won't have to go through all that."

Proposed House Bill #5616 (enclosure #3) now in subcommittee is designed to circumvent these uninformed physicians and to further assist SIDS families by referring them for optional counselling and mandating physicians who cannot find evidence of disease at autopsy to use the term Sudden Infant Death Syndrome.

The outcome of the proposed bill is not certain, but it certainly addresses itself clearly to the areas where SIDS families are currently being mishandled in Michigan.

INTEGRATION OF SERVICES

The Michigan Regional SIDS Center is funded by the United States Department of Health, Education, and Welfare through a private foundation (the Michigan Medical-Legal Research and Educational Association, Inc.). We contract out for direct counselling services through the Detroit Health Department, and we are available on a free consultation basis for educational programs, throughout the state, although we have mainly concentrated on the more heavily populated areas.

Children's Hospital of Michigan provides us with complimentary space for our bimonthly advisory board meetings and our monthly parent meetings. We recently (February 5 - 10, 1978) had Wayne County Sudden Infant Death Syndrome week (enclosure #4) in which we solicited private donations to privately fund a permanent volunteer staffed center out of Children's Hospital for SIDS families.

The state public health department is submitting an expanded grant in conjunction with our project for the following fiscal year that will be partially state funded in order that all families in Michigan receive services.

IDENTIFICATION OF PROBLEM AREAS

Through our direct contact with families we continually reassess the areas that are being mishandled, e.g.

1. Some physicians in Michigan do not believe in SIDS and refuse to use the term -- calling it a "waste basket" diagnosis.
2. Misinterpretation of autopsy findings is still frequently occurring with diagnoses such as viral pneumonia or pneumonitis being used in many cases (enclosure #5).
3. In some instances, families outside Wayne County are still waiting for several months for a final cause of death to be determined (until microscopic and toxicological studies are completed) (enclosure #6).
4. Occasional families are still subjected to police harassment.
5. The 10% of SIDS families whose babies present with clinical apnea prior to death are not being handled with any consistency by hospital emergency rooms and pediatricians.
6. In dealing with the Detroit Public Health Department it is apparent that public health nurses who are to do SIDS visiting require extensive preparatory training on the needs of bereaved families as well as continuing contact with our center. These nurses, well prepared in other health related problems, want to treat an SIDS visit as another health visit and have considerable difficulty in relinquishing the health teacher role for that of the trained listener, an essential part of bereavement counselling.

IDENTIFICATION OF EXISTING COMMUNITY RESOURCES

This goal met with little success initially until our center sponsored the formation of the Bereavement Resource Association (enclosure #7), a private association of professional and volunteer persons with a common interest in bereavement counselling, whose three main goals are to 1) identify persons and agencies in community that can provide support to SIDS families, in the event that our center no longer exists, 2) educate those persons about the special needs of bereaved families and how they can assist these families meet these needs (enclosure #8), 3) provide ongoing communication among such persons through monthly meetings where speakers give formal related presentations.

The auxillary benefits of our center include the interest it stimulates in other areas of infant health and safety (enclosures #9, 10).

CONCLUSION

In conclusion, our program is designed to meet the ongoing needs of SIDS families and functions efficiently in this regard because this objective does not conflict with co-existing programs that place other demands on participating personnel.

Senator CRANSTON. Thank you very much.

Dr. Jensen?

Dr. JENSEN. I am Dr. Francine Jensen, director of the Harris County Health Department. I do have additional copies of the remarks I am making tonight.

We have had a Federal grant for our SIDS project since mid-1975. We are in our third year of funding and are presently preparing a renewal application to come in.

We serve 13 counties in the gulf coast area of the State of Texas. It is not confined just to the Houston area. Our objectives I think are fairly well stated in the paragraphs of the written remarks.

The purpose of our project is to provide counseling to families who lose babies to this death syndrome, to establish more public awareness about this problem, to establish a registry for SIDS deaths, to seek speedy referrals of the names of parents who lose babies to this syndrome along with autopsy confirmation, and to promote the use of SIDS information in the educational curricula used by the medical and nursing educational institutions and other auxilliary personnel.

I think our program has been fairly successful since its operation. We have seen or have referred 240 prospective SIDS referrals made to us since our program became operational. Approximately 97 percent of these families have accepted our counseling, which is done by trained public health nurses, who receive special training in crisis intervention to assist these parents in coping with their problems.

We have achieved now 86 percent of these deaths being confirmed by autopsy, and we closely coordinate with the Medical Examiner's Office in Harris County and in Galveston County. We have assisted the parents who have lost babies to this syndrome, establishing a parent-community council in that area, and have worked with them to work with families who have undergone this trauma. Of course, in public education, we have consistently provided this.

Our project was primarily responsible for our State Legislature, in 1977, passing legislation recognizing sudden infant death syndrome as a disease entity and ordering State-paid autopsies on the probable causes of SIDS and requiring compassionate counseling of SIDS parents. Unfortunately, the State did not provide any funding for these autopsies.

We have been evaluated by consultation with the University of Texas School of Public Health in Houston on our project, and we have, you know, met our objectives I think very well in this 3-year period of time.

We have noted certain things in our work with these parents through the public health nurses. These families need and want to talk with professionals. They want to relate to other parents who have lost babies to this same syndrome.

We have now reduced the referral, in cooperation with the medical examiner's office in Harris County, from weeks down to approximately 3 days. When we get the referral we begin to move in with information via letter, via a home visit by the public health nurse, to provide information about this syndrome and to offer counseling to these parents.

We have found that in most of the parents that we reached this way, only one visit is usually required to establish the—to give them the information and to establish some kind of a support system, or to be sure they have access to one, whether it's the parent who lost a baby who does this, or a minister or grandparent or whatever. Around 3 percent of our families, where we have had to go back in with more than one visit, and we have had very few we have had to follow up with referrals for psychiatric and psychological follow-up.

We have found that parents need the results of these autopsies, although they are not always willing to give their permission for the autopsy at the time the death occurs. We have had parents tell us, "Had I been asked to give permission at the time my baby died, I would probably have refused. Now I would be willing to give it."

We have a unique situation in the State of Texas, and it has been touched upon by others, about this business of autopsies and reporting.

In certain counties in the State of Texas where we have medical examiners, the medical examiner can autopsy a sudden and unexpected death unattended by a physician when it's a specified length of time. So in Houston and in Galveston County, these are autopsied.

In the other 11 counties that we provide this information referral service to, we have a real problem, with the county judges and justices of the peace who serve as the county coroners. Three reasons are quoted for not ordering autopsies when these babies die of this syndrome. One, obviously, is the lack of willingness to spend county money for the autopsy; two is mutilation of the body syndrome, and the third one is "we don't want to satisfy medical curiosity".

Our State needs a unified SIDS reporting system, and I am hoping that through our project we can eventually initiate this, because we are getting requests from all over the State now for our nurse coordinator to go into other counties and other cities to assist them with what we have learned in our informational and referral service.

I suspect that we will have very little impact, because we have not accomplished too much in those rural counties without a medical examiner's office.

I can only say then, just to summarize, that yes, I think the Federal funding of these SIDS projects are important, and I think we have had some small success with our information and referral service.

[The prepared statement of Dr. Jensen follows:]

FRANCINE JENSEN, M.D., M.P.H.
DIRECTOR

HARRIS COUNTY HEALTH DEPARTMENT
2370 RICE BOULEVARD, BOX 25249
HOUSTON, TEXAS 77005

(713) 523-1041

February 6, 1978

This information is provided by the Sudden Infant Death Syndrome (SIDS) Counseling and Referral Service Project Coordinator housed in the Harris County Health Department under the direction of Doctor Francine Jensen. As of now we are one of the two federally funded SIDS service projects in Texas. The purpose of this project is to provide counseling to families who lose babies to SIDS, information dissemination and education to all aspects of the population.

Our program has been in operation since October, 1975. During this time we have had 214 suspected SIDS referrals. Approximately 97% of this number have accepted our counseling and referral services.

In addition to these services, our project has conducted workshops for allied health professionals, emergency medical services and law enforcement personnel on distinguishing factors involved in detecting possible SIDS and also methods of referring these deaths for counseling. We work to educate the general public through TV, radio, high school and university classes and on request, to community groups. Our services are now requested throughout the state for information on detecting, counseling and referring SIDS parents. In 1977 State Legislation was passed recognizing SIDS as a disease entity, ordering state paid autopsies on probable cases of SIDS and requiring compassionate counseling of SIDS parents. This legislation has yet to be funded.

An outside evaluator has given us high marks in fulfilling our stated objectives, in fact, surpassing our objectives. From our experience of the past 2½ years we have derived some pertinent information from the work we have done:

> SIDS families need and want to talk with professionals. Families want to relate to other parents who have lost babies.
>
> Families need the results of autopsies, although they are not always willing to give their permission for the procedure.
>
> The general public is in need of information on SIDS.

Texas needs a unified SIDS reporting system. Our program has had great success in educating medical examiners on the procedure for reporting in this area, however, we have little impact on the counties with no medical examiner.

Page 2

Our program has progressed beyond the difficult start-up period and is now regionally well known and working as a permanent counseling and referral service.

In the future we intend to devote more planned, structured time assisting the rest of those around the State who are trying to meet the needs of SIDS parents.

We would like to recommend that SIDS be re-funded as a line item in the Department of Health, Education and Welfare budget and that additional funds be considered for instructing professionals in expediting autopsies on all suspected SIDS cases, immediate reporting of autopsy results to parents, better use of SIDS code (795) on death certificates and better coroner/physician referral of SIDS parents for counseling.

If any further information is needed, please call (713) 526-8448 or write Harris County Health Department, P. O. Box 25249, Houston, Texas 77005.

Respectfully submitted,

Francine Jensen, M.D.

Francine Jensen, M. D.

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STATEMENT OF MASON H. JOHNSON ON BEHALF OF DR. WARREN HAWES, PROJECT DIRECTOR, CALIFORNIA INFORMATION AND COUNSELING PROJECT

Mr. JOHNSON. Mr. Chairman, my name is Mason H. Johnson, senior coroner's investigator, with the Medical Examiner-Coroner's Office in the County of Los Angeles.

Since I was to appear before this committee on another panel, and Dr. Hawes, the director of California's SIDS project was unable to be here, I would like to summarize his prepared statement.

The California Sudden Infant Death Syndrome Information and Counseling Project takes a statewide approach to the problem of SIDS. California is a growing State, with one-tenth of the entire population of the United States.

In 1973, the earliest years in which there was data available in the State of California, 305 cases of SIDS were reported on death certificates. This is a 1.02 per 1,000 live births. Of this number, 257 cases were autopsied. In 1976, the last year in which data is available, there were 521 cases of SIDS reported on death certificates out of 332,232 live births. This is 1.57 per 1,000 live births. Five-hundred and nine of these received autopsies, a rate of 97.7 percent. In 1975 the ratio was 98.7 percent of autopsies.

We can see, that because of the work of the California project, the number of autopsies have increased. In the State of California there are 58 counties. Sixteen of these counties contract with the State Department of Health Services; thirty-eight of the counties have full-time local health officers. Also within the counties there are various types of coroner's offices. Thirty-five of the coroners in the State of California are sheriff coroners; five are medical-examiner coroners: and the remainder are lay coroners, the public administrator and public guardian-type coroners.

The objectives of the project are: one, to develop and sponsor regional information conferences on SIDS. The conferences are offered to those individuals who are likely to have early contact with SIDS families, such as public health professionals, policemen, firemen, clergy, coroners, et cetera.

Objective two is to inform the appropriate county officials about SIDS legislation and their responsibility under the law, including any changes in the current legislation.

In the prepared statement reference is made to A.B. 409, that was passed in 1974, which gives the coroner the jurisdiction over possible SIDS cases. That law also requires the coroner, within 24 hours or as soon as feasible thereafter, where sudden infant death syndrome is the suspected cause of death, unless the infant's physician of record certifies sudden infant death syndrome as the cause of death and a parent objects to an autopsy, take possession of the body, order it removed to a convenient place, and make or cause to be made a postmortem examination or autopsy thereon.

Even though we have the State law, if it was not for the SIDS information and counseling project of informing the local health officers and the coroners of their responsibilities, we would not have as high a ratio of autopsies.

Objectives three and four are to provide the county health officers and county coroners with recent information regarding the nature and cause of SIDS and to help each county develop a workable protocol system for handling SIDS cases.

Objective five is to provide specialized training for selective persons who will be working with SIDS families.

Objective six is to gather, analyze and disseminate information collected on a standardized data form.

The staff of this particular project in California is headed by Dr. Hawes, who gives ten percent of his time to the project director. The nursing consultant gives 100 percent of her time, a graduate research technician gives 75 percent of his time and a clerk, 100 percent of his time. So you can see the staff for this project is quite small. Consider the advances we have made within the past 3 years!

Educational conferences are a big factor within this project. There have been many educational conferences throughout California. Some attracted as many as 500 people.

These conferences are often cosponsored by coroners offices, the State health department, local health department officials, and also police and fire personnel. The coroners offices are the most important factor involving the California project because, as has been stated earlier by Carolyn Szybist, without a medical examiner you have no project and management system of SIDS. For that reason it is very important to contact all of the coroners.

The project has found that one way to do this is by contacting the coroners through the statewide organization of the California State Coroner's Association,

An overview of the problem facing the local health departments and coroners is essential to understanding the delivery of health care given by them at the time. They are working under great pressure because of an increased workload and decreased funds. Other county fiscal matters take precedent over SIDS, which is given a low priority.

I can speak for the Medical Examiner Coroner's Office in Los Angeles County alone. Last year we autopsied 235 cases that were reported as SIDS, and 211 of these cases were a confirmed diagnosis of sudden infant death syndrome, eight were deferred, and one was pending.

In addition, there are no funds available to reimburse county health officers and officials for making home visits. Consequently, the SIDS information and counseling staff have to be very cautious when they go to a local health department to advise them of their duties and responsibilities and also to try to solicit their help. What they are doing is asking for additional work from the staff and not providing any funds.

The California SIDS staff realizes they have to work with the local health departments staffs over a period of time and to change attitudes and to sell them on the needs of the SIDS families.

This is the only way to assure continued service to SIDS families if the project is terminated—and I would like to underscore that—if the project is terminated.

Contact with the parents groups is a big factor involved in the SIDS information and counseling project, along with in-service training.

The California SIDS Project has worked on the concept that the service to SIDS parents should be provided by local community agencies, both private and public. The project has initiated and developed a statewide consultation and education program to local agencies since 1975. There were many difficulties encountered. The staff has since received a broad range of acceptance throughout the community.

In order for the program to continue, it is necessary that there be a continued Federal support of such services. There is no indication that individual States are eager to provide the financial support for such a program. Without Federal funds, the SIDS information and counseling projects would not be possible.

Thank you.

[The prepared statement of Dr. Hawes follows:]

DR Warren E. Hawes, MD
Chief, Maternal + Infant Health Section

CALIFORNIA SUDDEN INFANT DEATH SYNDROME INFORMATION AND COUNSELING PROJECT

INTRODUCTION

The California Sudden Infant Death Syndrome (SIDS) Information and Counseling Project takes a statewide approach to the problem of SIDS. California is a growing State whose population is presently one-tenth that of the entire United States. In 1976 the resident population was 22,000,000.

In 1973, the earliest year in which data were available, there were 305 cases of SIDS reported on death certificates (1.02/1,000 live births). Of this number, [illegible] cases were autopsied. In 1976, the last year in which data are available, there were 521 cases of SIDS reported on death certificates out of 332,232 live births (1.57/1,000 live births); 509 received autopsies (97.7%). This represents an increase of 50% in reported cases of SIDS and a considerable improvement in the number of autopsies performed when SIDS was suspected to be the cause of death. Additional details regarding the incidence of SIDS cases can be found in Exhibit I.

Of the 58 counties in the State, 16 counties contract with the State Health Department for health services and have no full-time local health officer. Both Sutter-Yuba Counties and Humboldt-Del Norte Counties share one health department and one health officer between each group of two counties. Each of the remaining 38 county health departments have full-time local health officers. Coroner's offices also vary within the state with regard to staffing: 5 counties have medical examiner's coroners, 35 sheriff coroners and 18 lay coroners - public guardians, administrators. All autopsies are performed by pathologists who are trained according to state law.

LEGISLATION

Highlights of California's legislation concerning SIDS are as follows:

> Legislation signed by the Governor in 1974[1] makes it the duty of the coroner to inquire into and determine the circumstances, manner and cause of death where the suspected cause of death is sudden infant

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[1] Statutes of 1974, Chapters 453, 1212 and 1259.

syndrome and, for purposes of inquiry, requires that the coroner within 24 hours or as soon as feasible thereafter, where sudden infant death syndrome is the suspected cause of death unless the infant's physician of record certifies sudden infant death syndrome as the cause of death and a parent objects to an autopsy, takes possession of the body, order it removed to a convenient place, and make or cause to be made a post mortem examination or autopsy thereon. The legislation further:

requires the coroner to notify, within 24 hours, the county health officer of any case involving an infant under 1 year of age where the gross autopsy results in a provisional diagnosis of sudden infant death syndrome;

requires the county health officer, upon being informed by the coroner of any case in which sudden infant death syndrome is the provisional cause of death, after consultation with the infant's physician of record, to inform all concerned if a determination is made that sudden infant death syndrome is the cause of death or probable cause of death;

requires the State Department of Health to keep each county health officer advised of the most current knowledge relating to the nature and causes of sudden infant death syndrome, and requires the department to report annually to the Legislature the number of autopsies and post mortem examinations performed by the coroner pursuant to the act and the number of such cases in which the coroner determined sudden infant death syndrome to be the cause of death, and

appropriated $17,550 to the State Controller for allocation and disbursement to local agencies for costs incurred by them pursuant to this act during the 1974-75 and 1975-76 fiscal years. No additional funds have been appropriated for this purpose.

OBJECTIVES

The objective of the California SIDS Information and Counseling Project are as follows:

1. To develop and sponsor regional information conferences on SIDS. The conferences are offered to those individuals who are likely to have early contact with SIDS families, such as public health personnel, policemen, firemen, clergy, and coroners.
2. To inform appropriate county officials about SIDS legislation and their responsibilities under the law, including any changes in current legislation.
3. To provide county health officers and county coroners with recent information regarding the nature and causes of SIDS.

4. To help each county develop a workable protocol system for handling SIDS cases. This protocol system includes the following:
   a. An interaction system between coroners and the local health departments for reporting cases determined as SIDS.
   b. Selection of personnel who will be responsible for consulting physicians and counseling families of SIDS victims.
   c. Development of a system for collecting SIDS data at the local level on a standardized data collection form prepared by the State.
5. To provide specialized training for selected persons who will be working with SIDS families.
6. To gather, analyze, and disseminate information collected on the standardized data form, and determine the current incidence of SIDS using a variety of methods.

STAFF

At the present time, project staff includes a project director (M.D., 10% time), project coordinator (Nursing Consultant, 100% time), Nursing Consultant (100% time - vacant), graduate research technician (75%) and one clerk (100%). The second nursing consultant left to be married at the end of October.

EDUCATIONAL CONFERENCES

A number of educational conferences have been held throughout California in which information was presented on SIDS and the problems faced by families experiencing this tragedy. Participants have numbered as high as 500. Many local agencies have cosponsored these programs, and the University of California at Davis has agreed to cosponsor a regional conference for the northern 29 counties in March 1978. Refer to Exhibit II for a listing of programs.

CONTACT WITH LOCAL HEALTH DEPARTMENTS AND CORONER'S OFFICES

Plans originally stated that project staff would confer with local health departments by visiting one health department each week to advise, develop, and support their SIDS Management program. This unrealistic goal had to be modified because of the great amount of time required to develop consultative relationships in each county. The main focus has subsequently been to develop relationships with the county health departments and coroner's offices to develop and improve SIDS Management programs in the counties.

An overall view of the problems faced by local health departments is essential to understanding the delivery of health care given by them at this time. They are working under great pressure because of an increased workload and decreased funding. There are fewer public health nurses working in the traditional role and they are making fewer home visits. County fiscal matters take precedence and SIDS is considered to be a low priority item.

In addition, there are no funds available to reimburse the local health departments in California for visits to SIDS families. With this in mind, the SIDS staff have had to be prudent in their dealings with health department administrators. In talking to many of the administrators about SIDS Management programs, they have had to be aware that they are introducing an additional workload for health department staff without providing additional funding. The California SIDS staff realizes that they will have to work with the local health department staff over a period of time to change attitudes and to sell them on the needs of SIDS families. This is the only way to assure continued services to SIDS families if the project is terminated.

Because of California law, there is no problem with respect to SIDS cases being autopsied.

The initial contact with the local health departments was by letter. The letters were written to introduce the new program to the county health officers and to request information about the county's management program for SIDS. The health officers were asked to name a contact person in their agencies who would be available to work with the State SIDS staff. They were asked to complete and return data collection forms on SIDS cases occurring after 1974. There was some resistance to this request for data. A few county health officers sent in data, but most completed with the request only after SIDS staff visited the county.

The preparation of the letter to the coroners was much more complicated. The letter was revised many times after the staff received comments from various people. A draft of the proposed letter was then prepared and sent to the Executive Board of the Coroner's Association for its approval before the draft was distributed to the group at its annual convention in July 1976. There was little comment from the group at the convention regarding the letter. Those coroners not present at the meeting were sent packets of the material that had been prepared by the State SIDS staff. The packet contained "Facts About SIDS", "Facts About SIDS for Police Officers", a copy of the Albuquerque Newsletter that contained information about the pathologist meeting held in the fall of 1975, California legislation, and the draft of the proposed letter.

The letter was finally sent on November 25, 1976. The response from the coroners was more immediate than that of the health officers. Eighteen (18) responded immediately and others have made the information available as they are contacted. The effort and concern demonstrated by the staff in approaching the coroners have been worth the effort. The staff was warmly received at their convention, and they have continued to receive support from the Coroner's Association.

Visits to the coroners' offices began as soon as the letters were sent. The coroners' investigators have been receptive and eager for any additional information. A number of the offices visited have had limited amounts of printed material. This lack of written information for coroners' investigators prompted the project coordinator to ask for help from Mr. Mason Johnson of the Los Angeles County Coroner's Office. It was suggested that Mr. Johnson prepare written guidelines for the coroners' investigators. The State nursing consultant edited the written material and made arrangements for a pamphlet to be printed and be distributed throughout California.

State staff have facilitated dialogue between the local health departments and coroners' offices. The coroners are aware of their responsibility under the law, and many had previously provided services to SIDS families, but this information was not known to the health department staff. In order to further facilitate communication between agencies in each county, the project coordinator has been inviting a representative of the local coroner's office, in addition to a local parent group representative, to participate in inservice programs given to health department staffs.

As of March 1, 1978, the staff has visited 27 county health departments one or more times, visited the nursing consultant responsible for the contract counties, and visited 27 coroners offices.

On its visits to these agencies, the staff seeks information about plans for exchange of information from the coroner's offices, health departments, parent contacts, counseling resources, data collection and reportings. The staff will also distribute information about the project's programs and recruitment from their agency staff for appropriate personnel to make visits to SIDS families. Refer to Exhibits III and IV for examples of State staff's contacts in two counties.

When all the counties have been visited, an effort will be made to begin making follow-up visits to all the counties to further develop their community management programs and to provide consultation services as needed. The staff also plans to write to the State coroners requesting information about the number of suspected cases of SIDS and the number of SIDS deaths that are actually reported on death certificates. This information is useful in developing county protocols, and staff is required to report this information to the State Legislature annually.

Staff has also established an effective means of providing SIDS education and of distributing information on SIDS to the coroners and funeral directors throughout the State by approaching these groups through their statewide associations. Plans are now being developed to reach paramedic and police trainers with similar kinds of consultation and education services.

CONTACTS WITH PARENT GROUPS

The staff have had contact with various parent groups and parent contacts in the State. Parents have been included in the educational programs related to SIDS and community management programs. A handout that lists parent contacts in California is continually being updated and distributed to community agencies and personnel for their information.

PROVIDING RECENT SIDS INFORMATION TO LOCAL HEALTH DEPARTMENTS

Last year staff initiated a library search (Medlar) on articles related to SIDS, death, and grieving. These printouts are sent to county health departments and coroners' offices on a periodic basis. Staff also plans to send copies of the book on research activities that was prepared by the National Institute of Child Health and Human Development office as well as the guidelines by the nursing task force when they are received. Information will also be given to the county health department through the Family Health Bulletin, a publication of the State of California, Department of Health, Maternal and Child Health Branch.

INSERVICE AND TRAINING SESSIONS

Training for individuals who may have contact with SIDS families is provided in two ways: one, in the form of inservice education programs, and two, in the form of a more intensive training program.

Inservice programs have been offered to various groups in the community. When these programs are presented to health department staffs, efforts are made to include a representative from the coroner's office and a parent from the community. Basic information about SIDS and the problems faced by both parents and professionals is presented in the program. Refer to Exhibit II.

The intensive training program has been offered to public health staff working in local county health departments. Material is presented in both didactic and experiential fashion to allow participants the opportunity to examine their own reactions to death and to discuss the problems they encounter in their contacts with grieving families.

Plans are being developed to prepare a module for training trainers of first contact persons (policemen, paramedics, etc.). Members of the staff's Northern Advisory Group agreed that this training should be a priority for the coming year. A police trainer from San Francisco, who was formerly employed by the San Francisco Policy Academy, has agreed to participate as a consultant in the development and delivery of such a module. Two other members of the Northern Advisory Group, and a criminal justice trainer from Butte Community College, have agreed to assist in developing such a module and in locating appropriate trainers to be trained.

CONCLUSION

The California SIDS project has worked on the concept that the services to SIDS parents should be provided by the local community agencies, both private and public.

The project has initiated and developed a statewide consultation and education program to these local agencies since July 1975. There were many difficulties encountered in establishing the program. The staff has developed a viable program which has received a broad range of acceptance from community groups in California. There have been increasing numbers of requests for consultation and education services. The level of local services has increased and the quality of the services greatly improved.

In order for the programs to continue, it is necessary that there be continued federal support for such services. There is no indication that individual states are eager to provide financial support for the SIDS programs. Without federal funding the SIDS information and counseling projects would not have been possible.

The staff sees this program as a way to advocate more humane treatment and care for families who experience sudden and unexpected tragedies. SIDS is only one condition in which families experience intense grief reactions. Families who lose children through accidents, drownings, or other diseases experience similar grief reactions. This program has provided professionals with basic information about the grieving process and how they can facilitate the process in grieving individuals.

The staff would like to expand the program to other areas pertaining to the promotion of a good family relationship. This includes not only handling the grief process but counseling in the family management of ongoing developmental crises such as pregnancy and separation.

2/22/78

SUMMARY OF STATE STAFFS
CONTACTS IN KERN COUNTY

Kern County is a rural county in central California. In 1974, the county had approximately 6,000 live births. The health department is a decentralized agency with 13 district offices. The nursing staff is composed of a director of nursing, assistant director of nursing, 7 supervisors, 70 public health nurses, and 14 aides.

Prior to June 1976, little had been accomplished in implementing a community management program concerning SIDS in Kern County.

Members of the Northern California Chapter NSIDSF and a project nurse with NSIDSF had visited the coroner's office and spoken to one of the pathologists in an attempt to increase the county pathologists' awareness of the SIDS problem. The parent group reported that little had resulted from the visit and the pathologist was not open to using the diagnosis of SIDS at that time. When the project coordinator visited the coroner's office in December, 1976, the pathologist reported he had attempted to start a SIDS parents' group in the area but had little success because the parent he had been working with moved. He said he also attempted to initiate a series of programs from the coroner's office but did not find much interest in the community for such a program. He said that he was conservative in his use of the diagnosis Sudden Infant Death Syndrome, and he used the diagnosis of SIDS only in appropriate cases.

In May 1976, a letter was sent to the 58 county health officers requesting information about their community management program for SIDS families. In early June 1976, the Health Officer from Kern County Health Department responded to the letter by saying that the letter had made him aware of a communication failure between his agency and the coroner's office. The Health Department and coroner's office had failed to establish a communication system in which the coroner's office would notify the health department of cases having a provisional diagnosis of SIDS. The letter encouraged the two agencies to exchange views about their management program for SIDS families.

At this time the State Project Coordinator received a phone call from Kern County's assistant director of nursing, who requested consultation regarding nursing contacts to SIDS families. She had just received word from the coroner's office that a provisional diagnosis of SIDS had been made. This was the first time that the health department had been notified of a SIDS case. The nursing consultant was not able to visit Bakersfield at that time, but she did agree to talk to the nurse who would be visiting the family. An appointment was made to subsequently visit the agency. Later the nursing consultant was notified that the coroner's office had reported on the following day that the death was not due to SIDS.

On August 11, 1976, the project coordinator met with the Director of Nursing and the Assistant Director of Nursing. The Assistant Director of Nursing was made responsible for the SIDS program. The meeting centered on giving information about SIDS, the needs of the family, and a discussion of how this information could be given to the nursing staff. Both nursing administrators were eager to present an in-service program to the public health nursing staff. They asked that a time be set in February 1977 because their top priority in the late fall would be the swine flu immunization program. They were also eager to implement the suggestions that the project coordinator made for a SIDS management program. Various materials, including copies of letters sent by different coroners in the State were left, and from this material they developed a protocol for their county. Several phone calls were made after this visit to discuss SIDS case management as cases occurred, and consultation was provided as needed.

On December 21, 1976, the two nursing consultants visited the Health Department to discuss the protocol that had been developed and to clarify plans for the in-service program and subsequent training session. The in-service program was planned for the entire nursing staff on February 18, 1977. They were given basic information about SIDS and viewed the film "After Our Baby Died".

After this program, the Assistant Director of Nursing asked for volunteers and selected eight nurses for the training session, which was held on February 24, 1977. This session provided the nurse with an in-depth experience from which they could learn more about SIDS and their reactions to death and grieving. Subsequent meetings are planned with this group.

Contact was also made with the Coroner's Office. The pathologist indicated interest in participating in the educational program for the Public Health Nurses.

The protocol for handling SIDS cases in Kern County is attached, along with letters sent to concerned families by both agencies.

The experience with Kern County shows the importance and the effectiveness of an official state agency staff working with a local county health department staff to develop a local management program for SIDS families that meets the needs of the community through consultation and education service provided by state staff.

SUMMARY OF STATE STAFFS
CONTACTS IN MARIN COUNTY

Marin County is a small urban county located in the San Francisco Bay Area. The residents have the highest income per capita in the state. In 1974, the county had 2,157 live births.

On December 3, 1976, staff received correspondence from the coroner explaining his procedure for handling SIDS cases. He said that the Marin County Coroner's Office had been closely associated with SIDS since 1968 and complete investigations and autopsies had been conducted on all suspected SIDS cases. He explained that California legislation extended their procedure of notifying the County Health Department.

His normal procedures, upon being informed of a crib death, requires that an investigator from his office proceed to the scene and investigate the death, as in any other coroner's case. If it appears to be a SIDS case the parent(s) are informed that a subsequent contact will be made with them by a parent involved with the National Foundation on Sudden Infant Death.

The parent is advised immediately by his office and prepares a packet to send to the family. A follow-up phone call is made by the parent pending the results of the autopsy and toxicology, and a visit is made by the parents if it is indicated at this point.

When the autopsy/toxicology results are complete, the newly bereaved parents are encouraged to consult with the coroner and to discuss the case so that they may understand the episode and findings. By this time, the parents have already been exposed to counseling from members of the NSIDSF chapter.

On March 14, 1977, the nursing consultant met with the Assistant Health Officer, a Public Health Nurse Supervisor, a Health Educator, and Administrative Assistant, and Public Health Nurse, the Assistant Coroner and a parent contact from NSIDSF. The Assistant Health Officer arranged for the meeting after being contacted by the nursing consultant. An informal and apparently effective SIDS management program had already been developed between the coroner's office and the parents. The health department had recently become involved with case management as a result of the interest of a public health nurse. The main accomplishment of the meeting was to inform and to clarify for all present the current informal management system which existed and to begin to define the County Health Departments role in coordinating these efforts so that continued follow-up services might be provided to families and reporting protocols could be developed. The Assistant Health Officer requested that a formalized notification system be established through Public Health and that informed coordination be maintained between Public Health, the Coroner's Office and the Parent group.

The Health Educator agreed to explore arrangements for a staff in-service program and workshop. The nursing consultant offered to supply her with examples of educational materials and consultation as needed.

As a result of this meeting, a plan was made to meet periodically and to work on developing protocol for the county. Initially, the group met on a monthly basis and have now decided to meet on a quarterly bases, in addition to case conferences.

Subsequent meetings were held between public health nurses, coroner representative, community mental health representatives and staff from suicide prevention. During these meetings the group discussed what services were available in the community, what overlaps and gaps existed, what were the needs of their community; adjustments were made in their various represented systems. A packet of information was prepared and an orientation program was developed for physicians through Pediatric Rounds in the local hospital and for Emergency Room staffs. A resource list was developed for distribution. The group also planned to have case conferences on specific cases after deaths occurred to explore which resources were helpful and available and to see that contact was made with the family during the year following the death.

The next task that the health educator undertook was to develop a program for training first responders in the community, a program that is still being developed. The group plans to continue dialogue and to work on developing and finalizing their protocol to discover gaps that occur in the procedure.

Through the efforts of the nursing consultants contacts, a dialogue was made available for community agencies to coordinate their services and to work together to improve services to SIDS families.

RICHARD P. GERVAIS
Coroner Public Administrator,
Public Guardian and Public Conservator

Telephone (805) 861 2006

Kern County Coroner's Facility
1832 Flower Street
BAKERSFIELD, CALIFORNIA - 93305

13

This is to notify you that the cause of death of your infant child was Sudden Infant Death Syndrome. This in itself does not explain the death of your child, and we feel, even though no one knows the reasons for such deaths, perhaps your mind can be put to ease somewhat by the attached information concerning Sudden Infant Death Syndrome.

We extend our deep sympathy in the loss of your loved one, and if we can be of any further assistance, please do not hesitate to call on us.

Sincerely,

Richard P. Gervais
Richard P. Gervais, Coroner

RPG:lfa
Enclosure

SUDDEN INFANT DEATH SYNDROME - KERN COUNTY PROCEDURE

December 1976

ROLE OF CORONER'S OFFICE

1. The Coroner's Office establishes the cause of death by performing an autopsy. All instances when S.I.D.S. is the suspected cause of death are reported to the Coroner's Office for confirmation (whether by PMD, DOA at medical facility, etc.).

2. The Coroner's Office informs the family when S.I.D.S. is the cause of death. The initial report may be given to the family by phone, however, in every instance the Coroner's Office sends the following written material to the family:

   a) A letter from the Coroner notifying the family of the cause of death and expressing sympathy;

   b) An information sheet outlining current knowledge about S.I.D.S.

3. When a diagnosis of S.I.D.S. is made, the Coroner's Office shall promptly notify the Assistant Director of Public Health Nursing (in her absence the PHN Director) in the Health Department, furnishing as much information as has been gathered to expedite completion of the State S.I.D.S. Study form. When the diagnosis occurs on a holiday or weekend the Health Department will be notified on the first working day following the holiday or weekend.

ROLE OF HEALTH DEPARTMENT

1. When the Coroner's Office notifies the Assistant Director of Public Health Nursing of a S.I.D.S., a letter from the Health Officer will be mailed to the family expressing sympathy and letting them know that a Public Health Nurse will be contacting the family in the immediate future.

2. The Health Officer, or, in his absence his designated representative, will contact the private physician or physician of record to inform them that a public health nurse will be contacting the family.

3. The Assistant Director of Public Health Nursing (or the PHN Director) will promptly refer all S.I.D.S. reports from the Coroner's Office to the designated PHN for followup and completion of the State S.I.D.S. Study form.

4. The Assistant Director of Public Health Nursing will complete as much of the State S.I.D.S. Study form information as can be obtained from available birth certificate, death certificate or during Coroner's Office initial phone referral and forward this to the PHN who will be visiting the family.

5. Immediately upon receiving the referral the PHN will make arrangements to contact the family.

6. The designated PHN shall make every effort to visit the family within seven days of the infant's death.

   The purposes of the PHN visit are as follows:

   a) To afford the family an opportunity to discuss the information received about S.I.D.S. and to receive additional information;

   b) To offer the family support during a critical grieving experience;

   c) To provide information needed regarding community resources -- financial assistance for burial, educational, medical (i.e. family planning, child health conferences for other children in family, counseling, etc.) and;

   d) To gather data not obtainable in other ways for completion of the State S.I.D.S. Study form. (This does not need to be completed on the initial visit.)

7. After the initial visit, the PHN will route the State S.I.D.S. Study form with data obtained through her supervisor, to the Assistant Director of Public Health Nursing for transmittal to the State Department of Health (with a copy of available birth and death certificates).

8. If more than one visit is made relating to S.I.D.S. the PHN will initiate a State S.I.D.S. Study form for each subsequent visit (see instructions).

(not yet developed)

KERN COUNTY HEALTH DEPARTMENT
AIR POLLUTION CONTROL DISTRICT

1700 Flower Street
P. O. Box 997
Bakersfield, California 93302
Telephone (805) 861 2231

LEON M. HEBERTSON, M.D.
Director of Public Health
Air Pollution Control Officer

Dear

The Kern County Health Department has been notified of your infant's unexpected death and the entire staff joins me in expressing its sympathy to you in this loss.

We realize that under the stressful conditions you have experienced, you may be left with many unanswered questions concerning Sudden Infant Death. Accordingly, I have asked a member of our public health nursing staff to call on you to explain The Sudden Infant Death Syndrome and help answer any remaining questions you may have. She will contact you in the next few days. It is my sincere hope that her call will be of comfort to you during this trying time.

If I can be of personal assistance, feel at liberty to phone me at 861-3655.

Sincerely yours,

Leon M Hebertson, M.D., Health Officer

LMH:lh

EXHIBIT I

LATE INFANT DEATHS - SIDS* INCIDENCE - AUTOPSY OF SIDS CASES

CALIFORNIA 1973-6

Year	Live Births	Post Neonatal Deaths (1-11 months)	Number of SIDS Cases Reported on Death Certificate	Rate of SIDS Deaths Per Live Births	Number of SIDS Cases Autopsied	% of Case Autopsied
1973	297,834	1286	305	1.02/1000	257	84.3%
1974	311,668	1323	497	1.59/1000	389	78.3%
1975	317,318	1337	525	1.65/1000	518	98.7%
1976	332,232	2826	521	1.57/1000	509	97.7%

*Sudden Infant Death Syndrome

SOURCE: Department of Vital Statistics, State of California

CALIFORNIA SIDS INFORMATION AND COUNSELING PROJECT
INSERVICE AND TRAINING SESSIONS

EXHIBIT II

Date	Group	Place	Length of Program	Type of Program	Content
4 /26/76	Coroner Investigator Training School 25 Sheriff deputies	Modesto	3 hr.	Coroner Investigator Intensive Training	Basic Facts Mason Johnson "After Our Baby Died" SIDS Management
/4/76	Riverside County Health Department PHN Staff 70+	Palm Springs	2 hr.	Inservice Education	Grieving Process in SIDS families "You Are Not Alone"
/30/76 6/30/76 /7/76 7/7/76 ~~/14/76~~ 7/14/76 ~~/21/76~~ 7/21/76 7/28/76	Los Angeles County Health Department 3 physicians 18 PHN's 20 MSW	Los Angeles	4 hr. didactic 8 hr. intensive training	Training program	Basic Facts About SIDS Grieving Process Communication Exercises Contact with Coroner Investigator and parents "After Our Baby Died" "You Are Not Alone" See attached program
7/9/76	6 Psychiatrics 1 Psychologist	Los Angeles	8 hr.	Training Session	Refer to 6/30/76
7/20/76	Coroner's Convention	San Jose	1 hr.	Speaker Convention	Information about California SIDS project "After Our Baby Died" Basic Facts
1/9/76	Annual National Convention of Physician Assistants 200	San Diego	1 hr.	Speaker Convention	
9/27/76	Sonoma County Health PHN Staff 40+	Santa Rosa	2 hr.	Inservice Education	Information about Cal SIDS project "You Are Not Alone" Grieving Process Introduction of 2 NSIDF parent contacts

Date	Group	Place	Length of Program	Type of Program	Content
1/17/77	Shanti (Volunteers counseling individuals concerned with death) 50+	Berkeley	2 hr.	Educational Program	Information about California SIDS Project Basic Facts "After Our Baby Died" Grieving Process Counseling Techniques
2/18/77	Kern County Health Department PHN Staff 70+	Bakersfield	2 hr.	Inservice Education	Pathologist role in SIDS Management "After Our Baby Died" Basic Facts See attached program
2/24/77	Kern County Health Department 8 PHN's	Bakersfield	8 hr.	Training	Refer to Program 6/30/76 etc. Los Angeles
2/28/77	Paramedics Orange County ? number	Orange County	2 hr.	Educational Program	California SIDS Project "After Our Baby Died" SIDS Management (may involve coroner investigator)
3/4/77	Riverside County and San Bernardino County Health Departments other community groups 175-200 people	Riverside	8 hr.	Conference	See attached program
Week of 3/14/77	Sacramento County Coroner Personnel 12	Sacramento	2 hr.	Inservice Education	"A Cry For Help" Basic Facts about SIDS SIDS Management
4/15/77	Community from Orange, San Diego, Riverside, San Bernardino and Los Angeles Counties will be invited	Costa Mesa	8 hr.	Conference	Program will be sent later

Date	Group	Place	Length of Program	Type of Program	Content
5/7/77	Community in Monterey County 100 participants	Salinas	8 hr.	Conference	Program will be sent later
week of 5/15/77	Funeral Directors Convention	Palm Springs	2 hr.	Speaker at Program	"After Our Baby Died" Basic Facts SIDS Management
May or June 1978	Community from Santa Clara Santa Cruz, Monterey and San Benito Counties will be invited	San Jose	8 hr.	Conference	Program will be sent later

EXHIBIT II

EDUCATIONAL PROGRAMS 1977-78

DATE	GROUP	# OF PEOPLE	PLACE	LENGTH OF PROGRAM	TYPE	CONTENT
6/30/77	Stanislaus Co. Health Dept. PHN's Paramedics (including instructor) Office nurses Hospital nurses Physicians	40+	Modesto	3 hrs.	In-service Education	Program sent in
7/15/77	Mindocino Co. Health Dept. PHN's, Health Officer Mental Health staff Hospital nurses Community Aides Office nurses Pediatric Nurse Practitioners Coroner	30+	Ukiah	3 hrs.	In-service Education	Program sent in
9/8/77	University Hospital Staff nurses	25+	San Diego	6 hrs.	In-service Education	Anticipatory grief Grief Management

Educational programs, cont'd

DATE	GROUP	# OF PEOPLE	PLACE	LENGTH OF PROGRAM	TYPE	CONTENT
9/29/77	Ventura Co. Health Dept. Firemen Coroner personnel PHN's	175	Ventura	3 hrs.	Inservice Education	Program sent in
10/20/77	Northern Advisory Group	19	Berkeley	2 hrs.	Preview of Educational materials & films	
11/17/77	Southern Advisory Group	15	Los Angeles	2 hrs.	Preview of Educational materials & films	
11/29/77	Radio & TV personnel: Community service announcers in Bay Area	25	Oakland	1 hr.	Luncheon	SIDS
12/1/77	Perinatal Health Staff	8	Berkeley	1½ hrs.	In-service Education	Preview of films

Educational programs, cont'd
3

DATE	GROUP	# OF PEOPLE	PLACE	LENGTH OF PROGRAM	TYPE	CONTENT
1/25/78	San Francisco Co. Health Dept.	225	San Francisco	8 hrs.	In-service Education	Community/Grief Management Program sent in
1/26/78	Representatives of 5 Bay Area Counties PHN's Social Workers Mental Health Clergy Coroner personnel Health Educators Hospital nurses Community aides Etc.	250	San Francisco	8 hrs.	In-service Education	Community/Grief Management Program sent in
3/3/78	UC Davis Nurses from Northern California	?	Sacramento	8 hrs.	In-service Education	Program sent in
3/31/78	Kern Co. Health Dept. PHN's	10	Bakersfield	3 hrs.	Follow up to Training Program	Case Management

Senator Cranston. Thank you very, very much.

I would like to ask a few questions of the panel, and would ask that one of you answers—whoever chooses to do so—unless the others have very strong disagreement or some exceedingly important point they feel needs to be added at this time. Otherwise, I would appreciate your providing me with any additional comments in writing for the record.

You heard HEW's representatives say, during their testimony earlier, that with less money we still would be able to serve more families. What are your feelings about that?

Ms. Smialek. Over the last 3 years we certainly have increased the responsibilities and duties of the personnel that are involved in the projects. We have a rather limited staff, working at full capacity at the present time.

To take on any more responsibility without additional funding would be almost impossible.

Senator Cranston. Their point seemed to be that with more experience and greater efficiency you could serve more. But you say you have reached the limits of that?

Ms. Smialek. Yes, we have reached that point. The longer you're there, the more needs you see, and therefore your duties are increased.

Senator Cranston. Could you take us through the process of—and one of you could do this—of exactly what happens when there is a SIDS death within the geographical area that one of your projects serves?

Ms. Dorsa. I could do that.

A call originates from the medical examiner's office when the autopsy has been completed. That call comes into my office. I then call the SIDS family to let them know the autopsy diagnosis has been made, give them information about SIDS as a disease, and initiate counseling depending on their immediate needs.

At that point in time, I then request a letter be sent out to the parents from the State medical examiner's office, confirming the diagnosis, and make the referral to the home health agency. A nurse then calls the family to set up an appointment for when she can visit with them.

This visit is usually made shortly after the funeral of the infant. The number of visits that are ordinarily made is between two and three.

Senator Cranston. Your answer would indicate that if there is no autopsy, one probably wouldn't hear about it. Is that correct?

Ms. Dorsa. That's right, unless the call came from the hospital emergency room.

Ms. Smialek. If I may respond briefly, we also provide the same services in Michigan. But in Wayne County, which as I mentioned before, handles 49 percent of these deaths in Michigan, we see the family before the autopsy is performed, so we are than able to explain to the family the beneficial results of having an autopsy, although within our county the medical examiner can perform an autopsy at his own discretion.

We do listen to parental objections, if they are extreme. We have a 97 percent autopsy rate within our county, and I think that is directly represented by the amount of time we spend with the families, up to 2 hours on occasion, to encourage them to have the autopsy performed.

Dr. **Jensen**. If I might elaborate a bit, we get a referral by telephone from the medical examiner's office on any suspected SIDS death, so we get a letter out immediately to the family, a joint letter from the health department and medical examiner's office. Then this is followed up with information on SIDS. The autopsy is confirmed later.

But we have found it is very effective, where we can get information into the hands of these parents as quickly as possible after the death of the baby, and then, of course, at a later date follow it up with the autopsy information.

Senator **Cranston**. I understand some medical schools have arranged for medical students to visit a SIDS project as one way of making future physicians aware of the sudden infant death syndrome on a personal basis.

Have any of you worked out such an arrangement with medical schools in your area?

Dr. **Jensen**. We've had some discussions with the pediatricians and faculties of the two medical schools in Houston. I think eventually this will be worked out.

Senator **Cranston**. Mr. Goldberg earlier criticized the projects for lack of involvement of parent groups in the development and operation of projects.

Could you comment on that?

Mr. **Johnson**. I would like to comment on that, Senator. We have two councils in California, a northern and southern council, and when I was moderator of the southern council we had very good cooperation from the Guild for Infant Survival, as well as the Foundation. We found no problems with the parent organizations, particularly in counseling as well as participating in the direction of the project.

I would say our council is very active in all activities of the project, its failure, and its success.

Senator **Cranston**. To what extent are autopsies on SIDS-suspected deaths not done because of parents withholding consent?

Do you have any information on that?

Ms. **Smialek**. Three percent in Wayne County.

Senator **Cranston**. Does someone in the back wish to say something? Please identify yourself.

Dr. **Weston**. I am Dr. Weston, medical investigator from the State of New Mexico.

Ours is a triculture, which includes the Navajo Nation as well as Spanish. A good many of these are Roman Catholic. And we have the Anglo population.

We pretty much exercise the same kind of policy that they do in Detroit, i.e., we advise the family that an autopsy is going to be done, not only because we have the privilege, but also because we listen to any vehement objection from the parents. As a consequence, we are doing examinations on 95 percent of this population, of whom two have been noted historically to have objections.

Senator **Cranston**. As to the question I asked about Mr. Goldberg and his criticism of the projects and the lack of involvement of parent organizations: I would like written answers from the rest of you who didn't answer that question, your feelings about that.

There are also some other written questions that we want to give you. I have just three more I want to ask verbally.

Do some State laws require that autopsies be automatically performed?

Ms. **Dorsa**. In New Jersey the law says an investigation must be conducted on any sudden and unexpected death. It is the practice of the medical examiner's office to do autopsies unless there is a severe prohibition by the family.

Senator **Cranston**. Do you think it is desirable to have it automatically required?

Ms. **Smialek**. I definitely do. Right now, in Michigan, there is a law that hopefully will be passed, that will mandate autopsies on all babies under 1 year.

I dislike giving up any of my own personal freedoms, and I can appreciate the feelings parents might have initially, but from my experience in dealing with families, of those families who do object, it is the three percent that decide against autopsy that develop many subsequent difficulties. It is then too late to remedy this situation and their questions cannot be answered. So I would definitely say yes.

Mr. **Johnson**. I would think we might have problems in someone mandating what a coroner should or should not autopsy. The law that gives the coroner jurisdiction and authority gives him the leeway to do it or not to do an autopsy. I know that raises a problem in some areas, because some people might not want to autopsy. But I think when you step in and start mandating to the coroner that "this you shall do, and this you do if you want to do", you can get some repercussions there.

Ms. **Smialek**. I have some strong feelings about that. I think there are a lot of medical examiners who are currently in positions of authority that do not appreciate what the problems of families are that don't have autopsies. That's one of the reasons we asked for this legislation.

Senator **Cranston**. Apart from the question of mandating, should the Federal Government play an active role in trying to bring this about in ways perhaps short of mandating that there be automatic autopsies?

Mr. **Johnson**. I would say, to encourage that all autopsies be done, yes.

Senator **Cranston**. Are there problems in getting autopsies performed because of differences between the medical examiners' system and the coroners' system?

Dr. **Jensen**. Yes, Senator. I tried to make that point in my comments earlier. In Texas, where we have those counties that have medical examiners, by law they can, you know, autopsy these unexpected deaths. In the rural counties, where the justices of the peace serve as coroners, these are the ones we do not get autopsies done on.

Senator **Cranston**. We have some more questions in writing, but that's all the verbal questions we have time for. Thank you all very much. You have all been very helpful, and thank you for coming from so far.

[The following was subsequently supplied:]

Zoe Smialek--Replies to Questions of Senator Cranston

III. INFORMATION AND COUNSELING PROJECT PANEL

1. A. WHAT TYPES OF SERVICE PROVIDERS ARE GENERALLY REPRESENTED ON A SIDS PROJECT?

In Michigan, we are represented by a project pathologist, public health nurse, and a consulting psychologist. We also work with the NSIDSF to provide parent-to-parent contact on a volunteer basis.

2. A. ARE ALL PROJECTS SET UP THE SAME WAY?

No, all projects are different and are set up to meet the needs of the community in which they exist. They are also influenced by the needs of the agency that sponsors them. As a center funded by a non-profit foundation, we have enjoyed relative autonomy in meeting those needs. I understand that some other projects funded under state health departments do not have this privilege.

B. IF NOT, WHAT MAJOR VARIATIONS ARE THERE?

Every project is so different that it is difficult to make distinctions or generalizations. Also, there is minimal opportunity to become knowledgeable about the services provided by other projects. The annual meetings are not designed for this purpose. I am aware of these basic variations in projects:

The basic service mechanisms of which I am aware include:

1. Immediate counselling services to families before or at time of autopsy at the medical examiner's office with a subsequent referral and followup by the public health nurse. (New York and Michigan)

2. Referral is made from medical examiners offices to the project which in turn provides direct counselling services by project staff. (Massachusetts)
3. Referral is made from medical examiners office to project which is located in the health department, and health department staff then provides counselling services.

Each project has widely varying funded personnel and provides equally widely varying services. It is difficult to determine how this was initially determined. Some projects have large budgets for mental health consultants, and some, such as ours, are limited in this regard.

Some projects fund autopsies, transportation to and from autopsy site. Some provide direct service, some contract through other agencies who provide services, and some refer families to public health departments who then assume this responsibility without reimbursement.

3. A. HOW ARE PARENT GROUPS, WHEN THEY EXIST, REPRESENTED ON YOUR SIDS PROJECT?

The parent groups

a. are represented on our Project Community Council,
b. are referred families who wish a contact with another family,
c. co-sponsor our monthly parent meeting, and
d. work with us to meet the needs in Michigan as effectively as possible. (As each problem is identified, we communicate with each other and decide who might best address the problem.)

3. B. **WOULD YOU PLEASE RESPOND TO MR. GOLDBERG'S CRITICISM EARLIER THAT PROJECTS HAD NOT ADEQUATELY WORKED WITH PARENT GROUPS IN DEVELOPMENT AND OPERATION OF PROJECTS?**

In Michigan this does not exist, but I can't say for the other projects. Projects should not assume responsibilities except in those problem areas that are, as yet, not being addressed. If parent groups have been effectively providing support and counselling to all families within their jurisdiction, this would not be a priority for the project.

Mason Johnson--Replies to Questions of Senator Cranston

1. A. What Types of Service Providers are genereally represented on a SIDS Project?

The mainstay of our program is the Public Health Nurse who provides information and counseling to families who lose babies to SIDS.

A project community council is a mandatory requirement for the Project. This project council works closely with the project on:

1) identifying areas of need for program activity
2) putting on educational programs
3) offering back-up support to project personnel
4) acting as a liaison between project and their particular disciplines

Members of the helping professions, i.e. ministers, often work with our project

Mental health professionals work with the project as individual counselors and as back-up to the nurse counselors.

2. Are all projects set up the same way?

All projects are not set-up the same way.

If not, what major variations are there?

1) some projects pay for individual counseling sessions. Our project's Public Health Nurse counselors have SIDS families as part of their regular caseloads.

2) our project is a regional project, 13 Houston-Galveston area counties, most projects are statewide.

3) our project relies on voluntary participation by justices of the peace and the two county medical examiners.

4) autopsies are not mandated in 11 of the 13 counties.

3. How are parent groups, when they exist, represented on your SIDS Project?

We have a standing position on the Project Community Council for the president of the Parent Group. We also have several other members on this council.

A member of the Parent Group usually accompanies the project personnel when we put on educational seminars and workshops.

Every SIDS family we visit provided the name and telephone number whereby the parent group can be reached. We have the parents sign a consent form if they wish us to give the parent group their name and address and telephone number.

In addition the Proejct Coordinator is a member of the Board of Directors for the parent group. The SIDS project pathologist is also the pathologist for the parent group.

With our project any new literature that is developed to be used with families is first previewed with the parent group. Also before we show any films we preview them with the parent group.

We have an excellent working relationship with our parent group and we work hard at keeping it that way. The parent group also identifies areas where there is a need for an educational program and will work with the Project in setting it up.

HCHD 3/78

FRANCINE JENSEN, M.D., M.P.H.
DIRECTOR

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March 21, 1978

Ms. Mary Aronson
Room 229
Russell Senate Office Building
Washington, D. C. 20510

Dear Ms. Aronson:

Attached are the replies to written questions given to me following the hearing on March 1, 1978.

If there are further questions, please contact me.

Sincerely,

Francine Jensen, M.D.
Francine Jensen, M. D.

mac

1. A. What Types of Service Providers are genereally represented on a SIDS Project?

The mainstay of our program is the Public Health Nurse who provides information and counseling to families who lose babies to SIDS.

A project community council is a mandatory requirement for the Project. This project council works closely with the project on:

1) identifying areas of need for program activity
2) putting on educational programs
3) offering back-up support to project personnel
4) acting as a liaison between project and their particular disciplines

Members of the helping professions, i.e. ministers, often work with our project

Mental health professionals work with the project as individual counselors and as back-up to the nurse counselors.

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HCHD 3/78

Senator CRANSTON. We now have the panel of Multidisciplinary Service Providers, consisting of Mason Johnson, who was on the last panel, Dr. Frederick Mandell, assistant clinical professor of pediatrics, Harvard Medical School, and Dr. James T. Weston, chief medical investigator for the State of New Mexico, and professor of pathology, University of New Mexico.

Because we are now about a half-hour behind our schedule, which was supposed to bring us to an end at 10:30, we are going to have to ask you, very firmly, to try to cover your verbal testimony in 5 minutes. The full testimony will go in the record.

STATEMENT OF DR. FREDERICK MANDELL, ASSISTANT CLINICAL PROFESSOR OF PEDIATRICS, HARVARD MEDICAL SCHOOL, BOSTON, MASS.; DR. JAMES TUTHILL WESTON, MEDICAL INVESTIGATOR, STATE OF NEW MEXICO; AND MASON H. JOHNSON, SENIOR CORONERS INVESTIGATOR, COUNTY OF LOS ANGELES

Dr. MANDELL. Thank you.

I am Frederick Mandell, from Boston, Mass., and I was asked to testify in regard to the education of medical students and medical training programs regarding sudden infant death syndrome.

I guess I have to start by saying sudden infant death syndrome is not an easy kind of medical education. There is something uniquely difficult about teaching the medical student about sudden infant death syndrome when he concretely observes a dead child. Those of us who consider ourselves teachers of medicine often feel quite comfortable teaching about congestive heart failure or pneumonia, but what teaching method do we use with a resident who is about to tell a mother that her baby has died?

I think in most situations students of medicine are trained to heal, and then often feel there is a right and a wrong way to do something in every case. Now they are presented with a dead child. I think students need to be trained for this helplessness and for not being the person in power.

The responsibility for making the diagnosis and often explaining sudden infant death to grieving parents is part of the role of the physician. These explanations require knowledge and compassion and sensitivity.

As you have heard, any innuendo of parental neglect is distorted and often misinterpreted. Unfortunately, in the area of sudden infant death syndrome in this country, there are still physicians who label sudden infant death syndrome as pneumonia or suffocation or choking.

There are also physicians who, because of a lack of understanding, and a lack of factual information, have inappropriate attitudes about sudden infant death syndrome.

Briefly, in regard to medical education, there are three points I would like to make: One, in general, there has not been a systematic attempt to include sudden infant death syndrome in the core curriculum of medical schools or pediatric training programs.

There has been some growth in this medical educational process, and some institutions have provided superior training programs. But in general, this has not been universal.

Second, the best kind of medical education programs are occurring when there is a human being who wants to teach about sudden infant death syndrome. Without interested and concerned teachers, many of the training programs in existence would probably fall apart. At present, there are even more complicating sets of circumstances which medical educators, medical students, residents and practicing physicians will be forced to consider, and I think you're about to hear about some of those.

All of these have to do with research: how do we interpret research; what is the relationship between sudden infant death syndrome and apnea; who should be monitored; what kinds of monitors are effective. These are now also educational priorities.

Third, in the field of medical education it would appear that the most logical place to learn about SIDS would be in medical schools or medical training programs. Within these programs are concentrated beginning students of medicine who are interested in health and disease and learning.

Core curriculum education at the earliest levels of medical schools appear essential if we expect in the future to aid and understand parents and to establish early research interests. It would appear so illogical and so unprofessional to stumble, just because of a lack of training, onto the loss of a well cared for, healthy child, who in the first year of life dies of sudden infant death syndrome.

Thank you.

Senator CRANSTON. Thank you very much for saying so much so fast.

[The prepared statement of Dr. Mandell follows:]

TESTIMONY OF FREDERICK MANDELL, M.D. FOR THE SENATE SUBCOMMITTEE ON CHILD AND HUMAN DEVELOPMENT OF THE COMMITTEE ON HUMAN RESOURCES

In our society, the death of an infant is an uncommon event in the history of a family. Fifty years ago, we had a pattern of behavior to be followed even after the loss of a child. This sequence has broken down as we have moved from home to hospital for critical care. Without it the necessity for management programs has evolved. The Sudden Infant Death Syndrome (SIDS) is the most frequent cause of death in infants who are between one week and one year of age in the United States.

Upon the physician, rests the responsibility of explaining Sudden Infant Death to grieving parents. The physician must know the facts about SIDS. Without this knowledge, preconceived notions of parents blaming themselves are reinforced. Typically parents examine the few hours before the death to search for minor omissions. They blame themselves for the minor omission and relate it to the cause of death. This must be clarified. These explanations by the physician require compassion and sensitivity. Any innuendo of parental neglect is distorted and misinterpreted.

The general approach to eliciting information from parents who have lost babies, sets the tone for dealing with the immediate loss and may set the tone for long term, complex, psychological difficulties. It may be thought that the physician is prepared to listen to parents who have lost their children and prepared to present concrete information about SIDS which will be helpful to grieving families. But if one observes carefully, one discovers that in many instances, it is not the case. The implied high standards must be taught.

There have been recent significant contributions orienting pediatric education to the importance of health and disease as they operate in the developing child, his family and his pediatrician. The de-emphasis of the superficial and descriptive approaches to pediatric teaching has constituted one of those significant advances in thinking about the needs of the growing child and his family. No one would wish to go back to the time in pediatric history when understanding of childhood illness did not go beyond the description of symptoms. And yet, in the realm of the Sudden Infant Death Syndrome there remains those physicians who have inappropriate attitudes because of their lack of understanding and inadequate armamentarium of factual information and therapeutic techniques.

In the field of medical education, it would appear that the most logical time to learn about SIDS would be during medical school and medical training programs. Within these programs are concentrated beginning students of medicine, who are interested in health and disease and learning. They are free of fixed concepts. In my own experience, I have found that clinical experiences in medical schools have often turned into research and exploration and searching for answers. The regional SIDS centers directly involved in medical school programs have attracted many students to work on SIDS projects. Also the National Sudden Infant Death Syndrome Foundation's summer scholarship program has interested medical students in SIDS pathology programs.

In general, however, there has not been a systematic attempt to include SIDS in the core curriculum of medical schools or pediatric training programs. While there has been some growth of this educational process and some institutions have provided superior training programs, this is not universal. SIDS education within the core curriculum of medical schools is sporadic, often superficial and frequently non-existent.

However, this is not an easy kind of education. There is something uniquely difficult about teaching the medical student about SIDS when he concretely observes a dead child. Those of us who consider ourselves teachers of medicine feel quite comfortable teaching about congestive heart failure, pneumonia and appendicitis. But what teaching method do we use with a resident who is about to tell a mother that her baby is dead?

There are a number of critical issues encountered by most students in the process of professionalism. The increasing barrage of experiences with patient's illnesses makes inescapable some inferences about the student's own vulnerability and those close to him or her. Recognizing these concerns and devising curricular innovations for helping students with them, will be a major contribution to medical education. Encounters with mortality are often in temporal juxtaposition with another critical experience, that of increased responsibility--not just the responsibility with which all young adults are attempting to cope, such as starting their own family, but in this instance, the doctor's often unrealistically perceived responsibilities for life, limb and death. In this psychological atmosphere, young doctors are expected to react to the tragedy of the unexpected loss of a healthy appearing infant. In most situations, students of medicine are trained to heal. They often feel that there is a right thing to do in every case. Now they are presented with a dead child. I think students need to be trained for this helplessness and for not being the person in power.

The best kinds of educational programs are occurring when there is a human being who wants to teach about SIDS. Students seem to learn about hepatitis and renal failure in medical school, even if individual teachers are not interested. It is quite different with SIDS. Without interested and concerned teachers many of the training programs in existence would probably fall apart.

At present, however, there are even more complicating sets of circumstances which medical educators, medical students, residents and practicing physicians will be forced to consider. At least some infants who have died of the Sudden Infant Death Syndrome would appear to have succumbed to an episode of spontaneous, prolonged idiopathic apnea. To the clinician and his students, there are some very difficult questions which await answers: Who are at high risk for subsequent SIDS? Who should be electronically monitored? What kinds of monitors will be most effective? Does monitoring work? Are other research approaches apt to be simpler and more efficacious, e.g. medications. The American Academy of Pediatrics is about to state that "24-hour surveillance is critical to the management of prolonged apnea." These are now educational priorities. If the educational process does not progress, physicians will find themselves singularly ill-equipped for this part of their profession.

My own continuous educational experience has been with the Harvard Medical School students rotating through the pediatric core curriculum at The Children's Hospital Medical Center, Boston. In this program I have attempted to present epidemiologic and pathologic information, to share data from my own experiences with parents and siblings and to relate the excitement and problems of SIDS research.

In our other school education program, the Massachusetts Regional SIDS center is responsible for the Boston University School of Medicine core curriculum SIDS program. Here, the entire sophomore medical school class, has the opportunity to listen to a multi-disciplinary SIDS presentation; a SIDS parent, a pathologist, a pediatrician and a nurse.

Unfortunately, there are still in this country, many physicians who label Sudden Infant Death Syndrome as suffocation or pneumonia or choking or child abuse. Core curriculum education at the earliest levels of medical school appears essential if we expect, in the future, to aid and understand parents and to establish early research interests. SIDS education may serve as a model for other areas in pediatrics in which the dynamics of bonding and parent-child interdependancy may also be broken. Most physicians are aware of the concept that every disease in every patient has a biological, a social and an emotional component. If these issues are disregarded or dealt with only incidentally, the process of stumbling in desparation and shielding from human responsibility develops. It would appear so illogical and unprofessional to stumble onto the loss of a well cared for, healthy child, who in the first year of life dies of Sudden Infant Death Syndrome.

Respectfully submitted,

Frederick Mandell, M.D.
Assistant Clinical Professor of Pediatrics
Harvard Medical School
Vice President, National Sudden Infant
Death Syndrome Foundation

FM/ac

Dr. WESTON. Senator Cranston and members of the committee and staff, a formal statement has been submitted, and my additional remarks will be limited.

As the sole representative of a medical examiner or coroner system in the group, perhaps I should address some of the points that have been raised by other panelists and by members of your staff.

Senator CRANSTON. That would be very helpful.

Dr. WESTON. SIDS for years has, by definition, been considered in a diagnosis of exclusion. It is a diagnosis which is established after a complete autopsy has been performed. In order, therefore, to have a SIDS information and counseling program, a community must have an agency which requires that an autopsy be conducted on such infants.

This has not been uniformly the case prior to the onset of the SIDS information and counseling programs, and is still not universal, but in the last 25 years few influences have had greater impact on the development of quality medical examiner/coroner systems in the United States than the SIDS information and counseling program.

In my formal statement reference is made to the "have's" and the "have nots". New Mexico is fortunate, in that they have seen fit to fund a program which has provided autopsies on about 30 percent of the people who die suddenly and unexpectedly at all age groups in the State. This has served as a stimulus for the individual who was then president of the local chapter of the National Foundation, to drop on my desk a copy of the Federal request for proposal for a SIDS information and counseling project. She suggested that we work together and write up such a proposal, which we did.

From that day henceforth, the advisory council of the local chapter, and our advisory council on the project have worked together as a team. This cooperation includes the last meeting of the group, where the president of the local chapter of the American Academy of Pediatrics, a member of our council, suggested that so great had been the impact of this counseling on SIDS families—we have conducted three home visits on more than 99 percent of our SIDS families—that he and his group urged us to consider extending SIDS counseling, or extending the team that is responsible for SIDS counseling, to include deaths of other infants and children who expired suddenly and unexpectedly from any cause, often accidental and occasionally suicidal.

A number of people have asked about mandatory legislation. As a medical examiner, I would encourage your committee to consider the impact of mandatory legislation requiring that local resources or perhaps federally offered resources be made available to conduct autopsies on infants when, in fact, there may not even be local resources to do autopsies on first-degree homicide victims, the consequences of which may have to be presented in criminal litigation subsequently. Failure to perform such autopsies may result in the failure to incarcerate somebody who was guilty of murder.

Finally, I would like to speak to the impact of the program on the medical students and the residents. Since New Mexico's program is one of the few that is actually within a school of medicine, the sophomore students are presented SIDS in their core curriculum. The residents are exposed to SIDS counseling as a part of their regular pathology training.

This has served, perhaps more than anything else in our State, to put the autopsy and the impact of that autopsy in the forefront, such that we are actually responding to more requests for postmortem examinations by families than our State legislature could possibly have anticipated for funding. This is one of several activities which have created such interest in the autopsy that citizens are now driving around our State with little tags on the reverse side of their driver's licenses which makes organ and tissues from their bodies immediately available without any further consent in the event there is a need for such an organ or tissue.

We look at the SIDS project and its impact on the community, and the professionals working with it, as being the stimulus for this kind of change in the reaction to postmortem examination and the utilization of the scientific efforts therefrom.

Thank you.

Senator **Cranston**. Thank you very, very much.

[The prepared statement of Dr. Weston follows:]

STATEMENT
of
James Tuthill Weston, M.D.
Medical Investigator
State of New Mexico
to
Subcommittee on Child and Human Development
of the
Committee on Human Resources
United States Senate

Mr. Chairman and Members of this Committee:

It has been suggested that this presentation deal with the interaction between the Sudden Infant Death Syndrome (SIDS) Information and Counseling Projects and medicolegal investigative systems, specifically medical examiners and coroners. The stock in trade of the forensic pathologist directing or working within such a program has been commonly referred to as the *problem-oriented autopsy*, an examination which is not done solely to satisfy medical curiosity (as it is frequently vaguely presented to families from whom permission to conduct such a procedure is sought after hospital deaths), but rather one which addresses itself to a specific question or questions, to which the procedure will hopefully provide the answers. The problems to be resolved by such procedures have changed significantly during the evolution of such systems. Middle English history tells us that the very first coroners were appointed agents of the King, charged primarily with ensuring that the Crown received an appropriate share of the deceased person's chattel. One of their very early additional assigned responsibilities, however, was the pursuit and execution of escaped felons whose heads after dissection were placed on spikes before the prison in the hope of deterring further escapes.

Traditionally, the coroner has served in a quasi-judicial role, charged with "determining the *cause*" of death by examination of the remains of those suspected to have died as a consequence of foul play by another, in anticipation of presenting positive evidence of such a deed at a subsequent criminal proceeding. This has been and unfortunately still is in many communities in this country the *raison d'etre* of such officials, often to the exclusion of any and all other considerations. When the first medical examiner was appointed the responsibilities of such an individual, a physician, usually a pathologist, were broadened to include investigation and examination of deaths wherein the resolution of the problem of cause, circumstances, and mode of death might be in the public interest. This might be to provide evidence at a criminal proceeding, the traditional role, to determine the presence of public health problems such as communicable disease in a more general sense, or accurately appraise the effects of virtually any social interaction, such as alcohol and drugs, suicide, child abuse, and similar conditions which might be masked without such intervention, thereby precluding definition of problems to which our government, using the term in its broadest sense, should address itself.

To this milieu of 30 widely disparate communities, some served by coroners with little or no professional expertise, and woefully inadequate resources, others quite sophisticated and, in several instances, already committed to information and counseling and, indeed, research programs in SIDS, some of the first monies of Public Law 93-270, the Sudden Infant Death Syndrome Act of 1974, were made available.

The effects of this program on medicolegal investigative systems and those working therein might be briefly summarized as follows:

1. To stimulate communication between professionals in the medicolegal investigative and academic research communities, leading to the development and acceptance of minimal standards for the investigation and examination of SIDS deaths, a condition which can only be accurately diagnosed after exclusion of other overt and subtle conditions which might cause death in

this age group. A committee of pathologists working with SIDS projects agreed upon these procedures in 1974.

The guidelines developed by this Committee have been subsequently circulated to all medicolegal investigative systems, whether or not they were involved in SIDS counseling projects. An expected indirect result of such an association was the piquing of the intellectual scientific curiosity of those in the medicolegal community into the research efforts of the academic community such that new research efforts were commenced. This intellectual enhancement extended throughout all of the efforts of the medicolegal group, thus enhancing their entire programs.

2. Exchange of methodologies and findings amongst the leaders of medicolegal investigative systems very rapidly apprised those in the "have not" category of the degree of community support and level of service in those "have" communities. The requirements for adequate investigation and examination included within this Act were met in several ways. Most communities provided local resources, but when those were not available the grants either provided them in toto or acted as a catalyst to ensure their provision, often by interaction between those who could and did meet these requirements and those who could not.

At first glance, as you ladies and gentlemen travel about the country, the wide disparity in medicolegal investigative systems from one community to the next may not be readily apparent, but please allow me to present two pictures, both based on real life experiences, either of which circumstances might prevail in even your own family's situation, depending upon the highway route you chose to travel through the West.

Let us consider a situation wherein a family in your constituency was traveling from or to vacation in the East or West. In one instance, in one state they have, or might again meet with an accident caused by the uncontrollable acceleration of their vehicle generated by the failure of a crucial part of the auto, resulting in the vehicle leaving the highway at a high rate of speed, overturning down a steep embankment, and thereafter resulting in total devastation of the vehicle and death of all of the occupants therein. Under such circumstances, in many areas of the country, the funeral director coroner would quickly remove, embalm, and prepare the remains, assuming the deaths were caused by the accident, without attempt to explain the accident, while the rural sheriff might similarly dispose of the vehicle at the closest junkyard without even superficial inspection to determine if vehicle failure contributed, thus depriving surviving members of the family of any financial claim for the vehicular failure.

In an adjacent state where the medicolegal investigative system, operating statewide, was supported locally at the $.77 per capita level, rather than the $.11 as in the above area, a middle-class family, found partly unconscious and partly dead in an auto of then recent manufacture, was adjudged by the trained initial investigator to be suffering from carbon monoxide, since both dog and cat on the vehicle floor were also dead. Those still alive were afforded emergency medical treatment and survived. Proof of the cause of death of the deceased was established by examination, and the vehicle was impounded before subsequent inspection which revealed that fumes from an incorrectly installed exhaust system were circulated into the passenger compartment through a quarter panel defect designed into the vehicle in the interest of economy by the manufacturer. The vehicle inspection and testing were performed by a qualified engineering firm operating independently of either party in prospective litigation, although the manufacturer was advised that he might have a representative present. Results of the investigation, referred to the manufacturer, served as the basis for recall of all similar model automobiles wherein the defect was repaired to preclude a similar occurrence. Based upon the investigation, financial settlement was reached between the manufacturer and the family, providing for the support of the surviving children.

This interaction between the "haves" and "have nots" in medicolegal investigative systems has extended into the communities at large, an action largely initiated by the zealous efforts of those in SIDS parents' groups who were witness to the impact of sophisticated investigation and examination and the important family counseling which was enabled therefrom. So zealous were the efforts of this group that they not only brought about increased support for improved investigation in many communities with existing effective legislation, but also successfully promoted legislation which required examination of infants suspected to have died of SIDS, unfortunately, in some communities which did not have the resources to accomplish this, not only in suspected SIDS deaths, but also in deaths following which criminal litigation might be expected to ensue.

3. Finally, Mr. Chairman, no discussion of the impact of the SIDS Information and Counseling Projects upon the medicolegal investigators would be complete without considering the humanity of the program and the effects of this humanity upon those engaged in this practice. Our late beloved professional leader, Dr. Milton Helpern, world renowned former Director of New York's Medical Examiner system, often referred to his large and busy autopsy room as "the place where death delights to help the living." Similarly, another of our greats, Lester Adelson, has appropriately designated the medical examiner as the family physician amongst the bereaved, the individual who ultimately must answer those questions which are often of utmost concern to families of deceased persons after the death of a loved one. These almost invariably extend beyond the cause of death and evaluation of therapy, primary purposes of such examinations conducted in hospitals pursuant to the wishes of a family, to include questions such as "How long did he suffer?" "Was there any condition which caused him to kill himself?" or a host of similar and soul-searching questions which another of our beloved professional leaders, one who has devoted a large portion

of her life to SIDS research, Dr. Marie Valdes-Dapena, has characterized as a warm feeling in her heart which she has felt many times in counseling SIDS families, long before the advent of the program providing federal funding for such counseling now under discussion. Dr. Dapena further predicted that such counseling would provide such emotional stimulus and gratification to her fellow physicians once they undertook to do it seriously that they might then consider the performance of autopsies one of their most important responsibilities. Unfortunately, a national trend amongst pathologists in the last two decades has had the opposite effect until just recently when the advent of problem-oriented autopsies, designed to address very specific circumstances, and the realization that these procedures, done well, are truly a much more sophisticated practice of pathology than perhaps laboratory direction, has served to reverse this trend. Personal, professional gratification of the pathologist resulting from such counseling, together with the rewards which the other groups have described to those counseled, has served in New Mexico to engender support from a number of professional groups to extend such grief counseling and death information service to a wider spectrum of society. Specifically, in our community, State resources have been provided to offer grief counseling services by trained, local paraprofessional personnel to the surviving parents of all children who die suddenly and unexpectedly. This is a direct outgrowth of the SIDS program in New Mexico.

Finally, Mr. Chairman and Committee members, I would be very remiss if I did not anecdotally bring the SIDS Information and Counseling Project to the level wherein there is positive, demonstrable proof of its impact on real people in a state which extends hundreds of miles in either direction, and encompasses land areas equal to multiples of most states in this country.

Several years ago an anguished family brought their dead child to the hospital in a small northern New Mexico community. The doctors couldn't tell them why the baby had died. Then, as the numbed parents sat in the hospital coffee shop, police officers arrived. They handcuffed the tearful mother and father and prepared to charge them with killing their baby. Later, when it was learned that the child had been a SIDS victim, the parents refused to press charges in an attempt to avoid any further publicity. They decided to leave their community rather than face the questioning stares of their old friends and neighbors.

Just recently, in the same part of New Mexico, a family was on a fishing trip when their baby suddenly died. The highway patrolman, deputy medical investigator, clinic physician, and nurse involved in this situation, had all attended a SIDS educational symposium, and the family received all the support possible, including sympathetic counseling and a piece of literature instead of official accusations.

Thank you.

March 1, 1978

Senator CRANSTON. Mr. Johnson.

Mr. JOHNSON. Senator, in 1973, in trying to develop a lesson plan on SIDS management for the first group of social workers and nurses, we found there was very little available in the way of instructional material. We find that even today there is not sufficient instructional material available for the training of professional and paraprofessionals who will be conducting the investigation of the SIDS victims, as well as being responsible for coping with the parents of the victim.

This is especially true for police and emergency personnel who are normally the first to arrive at the scene. In the areas where there is some training, it is usually associated with federally funded SIDS projects and/or parent-sponsored organizations promoting SIDS training for any organization that is willing to train its employees in the management of SIDS.

I believe that every person, especially officials who will be in contact with SIDS parents, should be thoroughly familiar with SIDS and the effect it has on parents, siblings, extended family, and society.

Those persons, with proper training, may prevent many psychologically related problems from manifesting themselves in the parents of SIDS victims simply by being knowledgeable about SIDS and by counseling parents.

Most public service personnel, police and paramedics, want very much to be of service to families of SIDS victims, but because of their lack of training, they are oftentimes ineffective and sometimes cause already existing guilt feelings to become intensified.

We must remember that it was just a few years ago that the medical profession began to recognize SIDS as a problem. Today, many in the medical profession possess little knowledge about the effects of SIDS on the family. Are we to expect law enforcement officers to be as knowledgeable as medical professionals?

No one needs to elaborate on the problems facing law enforcement today—problems of robbery, rape, homicide, child abuse, and many others. The individual police officer is a member of our society, a public servant, who in most cases wants to do the best job he has been trained to do. The key words here are: "Has been trained to do".

Officers receive training in many areas—interviewing techniques, report writing, evidence gathering, court appearances, traffic control, child abuse, et cetera. SIDS happens to be one area in which they receive little or no training. Whereas we cannot expect members of law enforcement to be as knowledgeable as medical professionals, we can provide them with sufficeint training and understanding to display sympathy and provide psychological support to the parents of SIDS victims.

A large number of police officers have never responded to the scene of a death. Even fewer have responded to the scene of a SIDS death. They are often inadequately trained in how to cope with the situation.

The nature of SIDS thrusts the first respondent into contact with distraught parents, babysitters, relatives, or others. What the first respondent does in the next few minutes or hours can have a profound effect on maintaining or disrupting the continuing health of the survivor.

A police officer drawing on his training and his own feelings often does what comes naturally to any uninformed person confronting such a situation. He feels much like most of the parents of SIDS, that someone must have done something wrong.

Do we expect an untrained police officer to feel different when the parents themselves believe that they may in some way have caused the child's death? The death of a child is most difficult for all concerned, including the first respondent—especially the police and paramedics. The first respondent must deal with their own feelings as well as those of the survivors.

The reason first respondents are not being trained in SIDS can be answered in one word—Priority. In California we have the Commission on Peace Officer's Standards and Training which has specific requirements for training of police officers and law enforcement personnel. SIDS training is not one of those requirements.

Developing good training modules is expensive and requires expertise not readily available to most police agencies. However, most agencies will use material when made available to them. An example is the film "A Cry For Help", distributed by the Department of Health, Education, and Welfare. Where training for SIDS exists, this film is always used.

It is recognized that some subsequent problems of a SIDS episode could be reduced if the first responders were sufficiently aware of SIDS and cognizant of the effects their actions might have on grief-stricken and guilt-ridden parents at a particularly vulnerable moment in their lives. Efforts should be made through whatever Federal agency and local agency, to have the Commission on Peace Officer's Standards and Training approve SIDS in their training.

Effective widespread training of first respondents could not only help them in service to the parents of SIDS, but also increase their concern and awareness in providing the kind of information that will add to the continuing research efforts seeking a solution to this problem of SIDS.

In our county of Los Angeles alone we have begun to train the paramedics as well as the fire department and the police department personnel. The Los Angeles County Sheriff's Department trains approximately 300 sheriff's deputies per year. The Los Angeles Police Department, trains approximately 300 or more officers per year. The Los Angeles County Health Department, which is responsible for training paramedics, trains approximately 125 to 130 paramedics per year. Other schools, such as local colleges are training paramedics. They have all agreed and will use materials made available to them in the training of paramedics and first respondents.

For this reason, we encourage that Public Law 93–270 be continued so that these projects can be funded.

Senator CRANSTON. Thank you very much. You have done a very remarkable job there in educating police officers on how to deal with the tragedy of SIDS and the individuals who are affected by it in a very compassionate way.

How many other communities train train police officers to recognize sudden infant death syndrome?

Mr. JOHNSON. I do not have a figure at present, but I do know that Modesto Junior College trains coroner **investigators in a college** setting, about SIDS. Rio Hondo Junior College also trains police officers from local municipalities, and they also have SIDS training. I believe the majority of them would use material if it was made available.

Senator CRANSTON. Are national organizations doing anything to push this?

Mr. JOHNSON. Yes. The International Association of Chiefs of Police.

Senator CRANSTON. But they have been pushing it?

Mr. JOHNSON. They have not been pushing it, but they are working in conjunction with HEW, in developing modules to be used. Their role is only at the advisory level. There is nothing compulsory on the part of any police agency to use their materials.

Senator CRANSTON. We have heard reports that parents of SIDS victims have been charged on some occasions with child abuse, manslaughter, or murder, and have been arrested and put in jail.

How prevalent do you think that is in the United States today?

Mr. JOHNSON. I can't speak for the United States, Senator—and by the way, I'm not a police officer; I'm a medical examiner/coroner's lay investigator. But in working with police officers in our area, it is very infrequent.

I really don't know of any occasion where the parents of SIDS victims have been charged with criminal negligence or abuse in Los Angeles County since 1974.

Senator CRANSTON. Do you have a comment on that?

Dr. MANDELL. I think this is much less than it used to be. Its prevalence has diminished remarkably over the last several years.

Dr. WESTON. I would concur. The National Association of Coroners and Medical Examiners, as well as the American Academy of Forensic Scientists, have both provided their lay investigators and their deputies with informational packets, provided by the public law we're talking about.

I know of no instance in the Western part of the country, in the last 3 or 4 years. However, it is still common to have the cause of death attributed, as has been said, to pneumonia and a host of other natural conditions which may leave the parents feeling responsible in part for neglect of the child.

Senator CRANSTON. Dr. Mandell, we have heard in the past that some health professionals themselves know very little about crib death. Since both the cause of the problem and methods of preventing it are unknown, to what extent is SIDS being included in the curriculum of medical schools now?

Dr. MANDELL. In terms of numbers, I don't know. In terms of impressions, I think there is not, as I said, a systematic approach. In areas where there are interested people, interested teachers of medicine, it has been included. It is still infrequent, I think, and rather sporadic.

Senator CRANSTON. Is anything being done to correct that deficiency?

Dr. MANDELL. Not that I know of, sir.

Senator CRANSTON. Do you believe there is any extensive use of this approach, of having medical students involved in SIDS projects where they exist nearby?

Dr. **Mandell.** I think in the areas where there have been projects in medical schools, for example, this has stimulated the students to be intereseted in research projects and asking questions and learning a great deal. It stimulates a lot, and it also acts as a model for other kinds of programs, where there are the kinds of bonds between a mother and child that are broken.

Senator **Cranston.** Is SIDS to any extent a part of the continuing medical education programs for physicians?

Dr. **Mandell.** In some places. I'm not sure of the full extent of that answer, sir.

Senator **Cranston.** Dr. Weston, following the 1975 Santa Fe conference which brought together pathologists from around the country in an attempt to develop a protocol for autopsies performed on infants suspected to have died of sudden infant death syndrome, meeting participants advocated local coroner or medical examiner laws which would require the reporting of all sudden and unexplained deaths of infants but afford discretion in the decision of autopsy.

What progress has been made since 1975 in the development of such laws?

Dr. **Weston.** Several States and a number of large cities have developed medical examiner programs in that period. A number of other States are considering legislation establishing such systems.

So this stimulation in the development of a statewide system, with discretion, has been a direct outgrowth of SIDS, as I said earlier.

Senator **Cranston.** Could you explain the difference between the medical examiner system and the coroner system?

Dr. **Weston.** Yes, sir, there's a great deal of misunderstanding. The name, in and of itself, probably does not denote as much distinction as it did formerly.

Historically the coroner was a quasi-judicial authority, who was more concerned with situations in which a crime was suspected. However, through the years in this country, and in Great Britain, from whence our office of the coroner came, this has changed such that our best coroner systems today in this country, including the one in Cleveland, Ohio, which has been a pacesetter for many, many years, rank certainly as good or better than many of the medical examiner programs.

The coroner may not be a physician. He is usually elected and therefore subject to political influence. Medical examiner programs are physician-pathologist directed. They are charged with, not only the investigation of deaths of suspicious or criminal nature, but also, deaths from conditions which might constitute a threat to any segment of our society. The capabilities of such programs relate to their enabling legislation, the resources made available for such a system, its freedom from unwarranted political pressures, and the integrity of the people who are working within the program.

Senator **Cranston.** How are most States set up now, medical examiner or coroner?

Dr. **Weston.** If they're a statewide program, it's invariably a medical examiner or medical investigator.

Senator **Cranston**. Is there a trend in any one direction?

Dr. **Weston**. Yes, sir. The trend is decidedly toward medical examiner programs.

Senator **Cranston**. Are there any States now selecting the coroner system?

Dr. **Weston**. In statewide programs, none of which I am aware. Those that are replacing the coroner systems are usually doing so statewide.

There are several States such as Florida and Alabama which have enacted State medical examiner legislation in the last several years. In some States, State resources meet the expense, in others such as Florida, county or community resources fund them.

Senator **Cranston**. Are there particular difficulties or problems with respect to the quality of the autopsies performed on SIDS victims?

Dr. **Weston**. Yes, sir. That is one of the greatest difficulties.

The word "autopsy" has been used as if every autopsy was conducted exactly the same, that is not the case. The cost of a quality, complete autopsy is considerable, including the cost of microscopic examination, microbiology, and other consultory costs reflects expenditures of considerable professional time by an interested, qualified pathologist. This often, if not usually, is costlier than the resources of a community. The result may be a lower rate paid, shortcuts in the procedures and an inadequate examination.

Senator **Cranston**. Thank you very much. You all have been very helpful.

[The following was subsequently received for the record:]

THE UNIVERSITY OF NEW MEXICO ☐ SCHOOL OF MEDICINE
OFFICE OF THE MEDICAL INVESTIGATOR
NEW MEXICO CENTER FOR FORENSIC AND ENVIRONMENTAL SCIENCE
ALBUQUERQUE, NEW MEXICO 87131, TELEPHONE 505 277-3430
ADMINISTRATIVE 505 277-2861

March 24, 1978

The Honorable Alan Cranston
229-C Russell Senate Office Building
Washington, DC 20510

ATTENTION: Mary Aronson

Dear Senator Cranston:

In response to the questions which you posed following the hearing of the Subcommittee on Child and Human Development of the Committee on Human Resources concerning the legislative responsibility for the Sudden Infant Death Syndrome Act of 1974 (P.L. 93-270), the following information is provided.

1. To a large degree, often because of the unavailability of Board certified forensic pathologists and pathologists, most of the states' medical examiner and coroner statutes do not have a specific requirement that the postmortem examinations be done by such qualified individuals. In most instances the vagary provided is "a qualified pathologist." There may be exceptions to this in some of the newer statutes with which I am not familiar. A copy of the medical examiner and coroner statutes for each of the states has been prepared through the efforts of Public Law 93-270. This may be obtained directly from Mrs. Geraldine Norris in the Parklawn Building.

2. At the present time there is no specific requirement that a Board certified pathologist participate in continuing education within his specialty. A number of the states, at the last count ten or twelve, including New Mexico, do require that physicians complete a specified number of hours of postgraduate education each year upon requesting relicensure. Each of the specialty Boards is developing some criteria for reaccreditation within their specialties. In some instances this is proposed to be by a challenge examination; in some instances by attendance at and satisfactory completion of examinations for continuing education courses. A committee of the American Board of Pathology has been deliberating on the method of accomplishing this within our specialty for approximately four years now, and have made a number of recommendations to the members of the Board as well as to the Liaison Committee on Accreditation of the American Medical Association. However, no final decision has as yet been reached.

The Honorable Alan Cranston
Page 2
March 24, 1978

3. Laboratory research about conditions in which state or local law requires the intervention of a medical examiner or coroner, such as the Sudden Infant Death Syndrome, or a host of other conditions such as the relationship of environment to disease in individuals expiring suddenly and unexpectedly, of necessity requires interaction between the medical examiner and the researcher. In the past this has often been accomplished by the "snipping of tissues" by members of the staff of the medical examiner which then are provided to the researcher in the laboratory. This has the disadvantage of making the most important part of the research collected by a somewhat disinterested nonparticipating individual and thereby limiting the quality of the material provided, whereas the role of the medical examiner or the forensic pathologist working for a coroner cannot help but be enhanced if an opportunity could be provided for him to conduct research in cooperation with those in the laboratory, utilizing the material made available through the examinations performed pursuant to medical examiner statutes.

4. A. The autopsy protocol developed at the Santa Fe meeting was in reality a minimum standard type of document. It was developed with the understanding that initially it would be difficult to obtain the cooperation of pathologists working with these projects, particularly since very little or no funds were provided for the performance of the examinations themselves in most jurisdictions. It is my personal belief that as the impact of the SIDS Information and Counseling Project has increased, and the rewards to the communities become more apparent, it would not be at all unreasonable to expect that the pathologists working with these projects would be willing to collect additional data, which may be of importance, both from postmortem examination and clinical investigation. In short, it would be very worthwhile to bring together the pathologists and a committee of the principal investigators for these projects to consider a proposal to increase the amount of information gathered. Of perhaps even greater importance would be the standardization of the format of the information obtained in such a way that it could be compared from one community to the other, and the development of a methodology to accomplish this data accumulation.

B. The protocol which has been developed has been fairly universally circularized to pathologists who might be in a position to conduct autopsies on SIDS. If the examinations have not been conducted in accordance with the protocol, or are considered to be of an inferior quality, it is not because the pathologists have not been apprised of the desired results, but rather because of a general disinterest in the performance of autopsies and a fairly universally low stipend afforded by the communities to the pathologists for conducting these examinations.

Enclosed with this document is a copy of a paper prepared by Dr. Robert E. Anderson, Chairman of this Department, which portrays the state of the art relative to the autopsy, past experience, and anticipated future trends. This entire document should be of interest to the Committee.

C. If at all possible, the pathologist conducting the postmortem examination discusses the findings with the family. This is limited in a state such as ours by geographical barriers, although the attractiveness of this proposition to the pathologists has been so universally recognized, as indicated in my original statement, that we are extending this type of service at The University of New Mexico to counseling of the survivors of all persons expiring within the hospital.

D. Many people have asked about the role of the family physician or pediatrician, and it is our belief that if he desires to be involved in this counseling, he should play the principal role or, if he desires to only assist, he should be invited to accomplish that. Initially, some of our major problems in SIDS counseling developed because the family physician or pediatrician was not made aware of our intended efforts.

E. The pathologist does, indeed, acquaint the family with the Information and Counseling Projects and the availability of parent groups.

Please don't hesitate to call or write if there is any additional information that might be provided.

Sincerely,

James T. Weston, M.D.
Medical Investigator and
Professor of Pathology

JTW:vc

Encls: (1) Six cpys ltr
(2) Six cpys Anderson reprint, "The Autopsy--Benefits to Society"

cc: Mrs. Geraldine Norris w/cpy Anderson reprint

P.S. Enclosed is the corrected transcript.

J.T.W.

Pages 333-35 contain copyrighted material and are not available for reproduction. "The Autopsy--Benefits to Society," Robert E. Anderson. American Journal of Clinical Pathology; v69 n2 p239-41 February 1978

Senator CRANSTON. We come now to our final panel on research, consisting of Dr. Marie Valdes-Dapena, professor, department of pathology, University of Miami, School of Medicine; Dr. Richard L. Naeye, chairman and professor, department of pathology, Milton S. Hershey Medical Center, Pennsylvania State University; Dr. Albert Cain, professor, department of psychology, University of Michigan; and Dr. Alfred Steinschneider, professor, department of pediatrics, University of Maryland School of Medicine, in Baltimore.

It is now 10:18, and we were supposed to quit at 10:30. We obviously can't. But if you will stick to the brevity rule, I would appreciate it.

STATEMENTS OF DR. MARIE VALDES-DAPENA, PROFESSOR, DEPARTMENT OF PATHOLOGY, UNIVERSITY OF MIAMI, SCHOOL OF MEDICINE, MIAMI, FLA.; DR. RICHARD L. NAEYE, CHAIRMAN AND PROFESSOR, DEPARTMENT OF PATHOLOGY, MILTON S. HERSEY MEDICAL CENTER, PENNSYLVANIA STATE UNIVERSITY; ALBERT C. CAIN, Ph. D., DEPARTMENT OF PSYCHOLOGY, UNIVERSITY OF MICHIGAN; AND DR. ALFRED STEINSCHNEIDER, PROFESSOR, DEPARTMENT OF PEDIATRICS, UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

Dr. VALDES-DAPENA. Senator Cranston, I am Marie Valdes-Dapena, pediatric pathologist from the University of Miami, at the Jackson Memorial Medical Center.

I first began to work in the sphere of sudden infant death syndrome 21 years ago in the office of the medical examiner in the city of Philadelphia.

In the following year, in 1958, I undertook my initial research project which was funded by the National Institutes of Health. In the ensuing 20 years, from 1958 to 1978, I have been engaged in a series of research projects directly related to this particular problem, all funded by either grants or contracts from the National Institute of Child Health and Human Development.

On account of that intimate association for so long a period of time, I have been privileged to witness at first hand an amazing revolution in awareness and understanding of this phenomenon on the part of both the medical community and the public at large. And 20 years ago there were no parent groups; they just did not exist. Now they abound and their might is felt at the highest levels of government. Witness our gathering here this evening.

Also, 20 years ago articles appeared in the medical literature on this subject at the rate of about one a year, and now they have proliferated so rapidly that the interested, conscientious reader can scarcely keep abreast. In those days, scientific research in the area was felt by many to be absolutely impossible; others saw it as imprecise; it was considered "dirty" research. Now, even the finest academicians are eager to participate. The scene has certainly changed.

However, it was only 7 years ago that Dr. Eileen Hasselmeyer and I co-chaired the first Research Planning Workshop at the

National Institute of Child Health and Human Development—a mere 7 years ago. That workshop was designed to plan a strategy to engage the interest of qualified investigators in undertaking research in this area.

I consider the 1971 conference to have been the single crucial turning point in the history of this subject. As a direct result of that particular meeting and its 12 daughter conferences, academia is now not only aware of the phenomenon, but has its "sleeves rolled up" and is working hard at probing the mystery.

A big part of the result of the wave of investigation which followed that conference has to do, as you mentioned earlier, with our present concept of the affected victim as not having been entirely normal from the time of birth, and the two people most responsible for our changing ideas about this sit at the table now—Dr. Steinschneider and Dr. Naeye.

It was in 1972 that Dr. Steinschneider proposed that these babies suffer from repeated attacks of not breathing and that ultimately they die in that manor. Then Dr. Naeye, the pathologist, took that up and began to look for microscopic evidence of a lack of oxygen. Of course, as we all know, he did find them. Then he and others pursued the matter by delineating ways in which these babies are different functionally—in their breathing, heart rate patterns, swallowing, crying and so forth.

These babies we now know may even be different biochemically. They probably are. And the crowning achievement, of course, is the fact that now evidence is in from, for example, the study in Boston: of 40 babies who had repeated attacks of not breathing, four have died of the sudden infant death syndrome. It is clear that we know at least one of the basic mechanisms of the sudden infant death syndrome—and there are probably more.

Most important, however, is the fact we still cannot identify the susceptible baby when he is born, and we ought to be able to do that. We have come a long way, but we have a way to go.

I am certainly gratified that the President has recommended an increase in the allocation of funds for this kind of research. However, as has been pointed out, it will not suffice to fund all currently-approved programs, but probably only about 40 percent of them.

As an investigator, I would strongly urge continuation of the legislation in question this evening for at least 3 years. As an investigator, I believe firmly that we dare not permit our present research effort to diminish at this time, because the momentum academia has just now attained should not be permitted to abate. Both common sense and the public welfare demand it.

I thank you.

[The prepared statement of Dr. Valdes-Dapena follows:]

THE SUDDEN INFANT DEATH SYNDROME

The Testimony of Marie Valdes-Dapena, M.D.

I am Marie Valdes-Dapena, M.D., Director of The Section of Pediatric Pathology at University of Miami - Jackson Memorial Medical Center and Professor of Pathology and Pediatrics at the University of Miami School of Medicine.

I first became interested in The Sudden Infant Death Syndrome - then known as crib death - in 1957, twenty-one years ago - while working at the Office of The Medical Examiner of The City of Philadelphia.

I was engaged at the time in an attempt to train myself in the sub-specialty of Pediatric Pathology by means of performing all post-mortem examinations there involving infants and children. In the course of that endeavor I encountered, for the first time, typical examples of the phenomenon of infants who had seemed well or relatively well - and who, at autopsy - revealed no cause whatsoever for their having died suddenly, unexpectedly and inexplicably. After about six months of that recurring frustrating experience I undertook my own first research project which in 1958 was funded by The National Institutes of Health. In the succeeding 20 years NICHD has awarded me 10 grants and contracts for what has turned out to be an almost continuous series of investigative projects directed toward increased understanding of various aspects of the phenomenon including the role of viral infection, epidemiology, the parathyroids, the "electrical" conduction system of the heart, etc.

Over the past two decades I have been privileged to witness, at close hand, an amazing evolution in awareness of this phenomenon - on the part of the medical community and the public at large. In 1957, there were no parent groups; now, they abound and their might is felt at the highest levels of government. Twenty years ago publications on the subject appeared in the medical literature at the rate of about one a year, and many of those were of less than optimal quality; now, related scientific articles are so numerous the conscientious reader can scarcely keep abreast. Similarly what little research was being done in those early days was simple and unsophisticated. In 1978, not only is the number of projects vastly increased but so is their quality.

In August of 1971, only 7 years ago, Dr. Eileen Hasselmeyer of NICHD and I co-chaired the first Research Planning Workshop on The Sudden Infant Death Syndrome - at and for the National Institute of Child Health and Human Development. I now consider that conference to represent a real turning point in the recent history of scientific investigation of this problem. As I mentioned earlier, some worthwhile research had been conducted prior to that time and had been supported by federal funds, but the phenomenon was not a matter of widespread scientific interest; the majority of academicians, even in Pathology and Pediatrics, had virtually no interest in the subject - in fact, were still completely unaware of it. That conference lit a fire which has burned progressively, more intensely and over a progressively wider area ever since. On that day, a small select group of knowledgeable people from a number of related disciplines met to plan the strategy of a broad, government-supported program to engage the interest of qualified investigators in appropriate fields.

It succeeded. Since 1971, 12 subsequent "off-shoot" conferences have been convened by NICHD, each bringing together certain specialists the efforts of whom, it was indicated at the outset,might shed some light on all of that which was still unknown in relation to the subject.

As a direct result of those thirteer meetings, academia now not only knows about the Sudden Infant Death Syndrome but is working intensely to probe its mystery - in an incredible variety of ways. Our understanding of the entity has evolved to a degree one never would have thought possible, even seven short years ago.

Probably, the single most important outcome of this new surge of investigative effort is the growing concept of the affected infant as being other then entirely normal from birth. As little as seven years ago it was generally agreed that the classic victim of this tragedy was a well-nourished, well-developed baby in the peak of health, whose sudden and unexpected death remained unexplained after the performance of an adequate autopsy. Most experts conceded that the majority of them had experienced some mild recent illness, usually an upper respiratory infection, presumably viral in nature, just before death but none of them had sustained prolonged or serious illness.

That last still seems to be true - but as our knowledge increases we now perceive many ways in which these infants have been "different from normal", both structurably and functionally - and even chemically.

For example, in two independent studies each involving hundreds of infants, the results of which were published in 1974 and 1975, it became apparent that in head circumference, body length, and weight gain these infants, as a group, exhibited growth which was significantly less than optimal. In fact, in one of the sets, their average body weight had diminished from the 40th percentile at birth to the 20th percentile at four months of age.

A number of other anatomic differences have come to light as direct results of the intense investigative efforts of Dr. Richard Naeye. He has shown, in work since confirmed by ourselves, that these children are different from normal - as a group - with regard to the microscopic appearance of certain of their tissues. One concerns the fat surrounding their adrenal glands, which in affected infants retains a fetal appearance (resembling brown fat in hibernating animals) for a longer period of time than it does in normal babies. Similarly many infants who have died in this manner seem, at 3 or 4 months of age, to have been producing red blood cells within their livers - which under ordinary circumstances is anticipated only in infants during intra-uterine life. (We since made the same observation in our own laboratories.) Dr. Naeye interprets these alterations as being the consequence of chronic oxygen deficiency within the tissues.

A number of investigators have recently explored the possibility that affected infants are or have been different from normal with regard to certain physiologic functions. The most comprehensive of these was a review of data collected prospectively in the Collaborative Perinatal Project of The National Institute of Neurological and Communicative Disorders and Stroke. Of the nearly 60,000 conceptions documented in that gigantic prospective study 125 terminated in crib death. These were compared, "retrospectively" with ideally matched control infants from the same group who had survived. The victims of sudden death were noted to have had more low Apgar scores at birth than controls; twice as many had required neonatal resuscitation and the administration of oxygen. More had experienced respiratory distress and more had required the administration of antibiotics. Feeding problems were common among them, their bottle feeding had been delayed and feeding by tube was more often required. A variety of neurologic abnormalities were observed more frequently among future victims than in the matched controls; these included jitteriness or tremulousness, abnormal reflexes, generalized deficiency of muscle tone and unusually elevated or lowered body temperatures. The data for all of these differences prove to be statistically significant.

In a separate retrospective study of behavioral patterns 46 victims were compared with their own surviving siblings at comparable ages. Those infants who had later succumbed to crib death were voluntarily described by their parents as having been less active physically. They exhibited less intense responses to stimuli; were more often breathless, more easily tired and had cries of different pitch. These differences too were statistically significant and correlated well with Dr. Naeye's purported "tissue evidences of oxygen deficit...".

In three independent instances, individual infants were the subjects of intense physiologic investigation during the neonatal period; each of the three later died of The Sudden Infant Death Syndrome. One had been a participant in a study of fetal heart rate patterns during delivery, one in an electronic study of the cry of the newborn and the third in an examination of neonatal learning ability using the heart rate and its response to an auditory stimulus as the monitor. In each case the investigator, having learned of the crib death, returned to his data bank and compared the recorded performance of the baby who had died with that of an appropriate set of control infants. In each instance the investigator found that the victim had performed differently from his peers.

Dr. Henry Lardy at the University of Wisconsin has identified a biochemical difference between affected babies and matched controls. In tissue taken at autopsy from the livers of 122 babies, he has found levels of a certain enzyme referred to as PEPCK - to be considerably lower in victims than in normal infants. Dr. Richard Hanson of Temple University School of Medicine has just reported a similar observation; their work, however, is not as yet complete. This enzyme is related to the metabolism of blood sugar and what bearing, if any, its deficiency may have upon unexpected death remains unclear.

Thus the impression of subtle but real differences between these babies and others grows; it seems ever more likely that babies who die in this fashion are not entirely normal at birth and probably have been ever so slightly physiologically handicapped from the time of their intrauterine existence onward.

There is an increasing body of evidence that many of them experience repeated episodes of protracted failure to breathe - even for periods of time in excess of 20 seconds. This new knowledge is exciting. It demands further investigation and verification. Will that tendency assist in the identification of some or many susceptible infants at birth? That crucial question remains to be answered.

The primary goal of research in this field is to attain an understanding of the essential mechanism or mechanisms of death. The second is to enable the clinician to recognize the infant at risk - at birth - so that the baby's life can be supported appropriately.

As for the first, I believe we now know one potential mechanism, prolonged apnea, or not breathing, but there are probably others. It seems to me that in order to identify them we will have to continue with a broad program of sound research in monitoring a number of physiologic functions in large, special groups of infants - in several centers.

In addition, it would seem necessary to continue and even to expand the work in Anatomic Pathology begun by Dr. Naeye. Like the fossilized images of the archeologist, these microscopic determinations, in large numbers of patients, provide us with objective clues as to the subjects' basic difficulty; in them we read, little by little, the story of what went wrong. The work is tedious and requires untold patience and objectivity but it has served us well in our recent progress and will likely continue to do so.

As for the second goal, recognition of the victim-to-be, we are still unable, with any degree of assurance, to identify the individual susceptible newborn.

Perhaps a well coordinated comprehensive retrospective survey of large numbers of cases will afford us better accuracy than we now possess. It is at least worth an attempt.

We are gratified that the President has requested an increase in the allocation of funds to NICHD for this investigative effort during the coming fiscal year. However, the sum suggested will not suffice; it promises support for approximately 40% of all related scientific proposals currently approved by the peer review system. In other words, a substantial number of worthy investigators with promising ideas and, more importantly, a genuine desire to explore this important issue, will be paralyzed for lack of financial support. I strongly recommend continuation of the legislation in question, for a minimum of three years.

To my mind, as an investigator, there is no question but that we are obliged to continue our research. The momentum academia just attained must continue unabated. Common sense and the public welfare demand it.

Senator **Cranston**. Thank you for your very eloquent statement.

Dr. **Naeye**. I am Dr. Richard Naeye from the Pennsylvania State University, and I direct the SIDS research programs at that institution.

Dr. Weston touched on a very critical problem for this particular legislation, and he indicated that SIDS is a diagnosis of exclusion. From a research point of view, this is not realy true. We can find chronic abnormalities in about 60 percent of the SIDS victims.

Now, Dr. Weston and all the other conscientious medical examiners are really handicapped, because in order to demonstrate these chronic abnormalities, expensive techniques are required that are not available to most medical examiners. The bottom line question is whether these sophisticated techniques are really appropriate.

I think many parents are, indeed, satisfied by a diagnosis of exclusion, but some are not. Many years later you find some parents agonizing over what happened to their child, most dissatisfied with the routine autopsy that gave them a diagnosis by exclusion.

I raise this problem, but I can't give you an answer. It's a very difficult issue right now.

With sophisticated autopsy analyses, one finds in about 60 percent of SIDS victims a whole series of anatomic abnormalities that indicate that the infant was chronically under-ventillating his or her lungs long before death. This, of course, leads to chronic low levels of oxygen in the blood. This, in turn, lends to changes in many different organs in the body, the heart, in the kidneys, in the bone marrow, sometimes in the liver, and in the brain itself.

These findings raise new problems. For a long time we felt that the brain damage found postmortem in SIDS victims wasn't too significant and that if we could only keep such infants alive there wouldn't be any long term residual brain damage. Now we're not absolutely sure about that. There is quite a lot of damage in some of the brains at postmortem, and the more we study the more we find. Now for the first time we are beginning to find evidence of other mechanisms of death besides the one of just stopping breathing when they're asleep.

For example, it has been known for a long time that an occasional infant makes noises at the time it does, and this suggests there has been some type of upper airway obstruction. Recently Dr. Weitzman in New York has been able to visualize an actual closure in the posterior pharynx in two near miss cases, and we have found from reports by mothers of abnormal cries and feeding problems that some SIDS victims must have had something wrong with their pharyngeal control mechanisms. As we have explored more carefully, we have found a major deficiency of cells in the area of the brain that controls the tongue's action.

We are strongly suspicious from some of the detailed descriptions by family members that something is wrong with the diaphram, or the mechanisms that control the diaphram, in some SIDS victims.

So I would say, in addition to the initial observations of primary apnea or stopping breathing in some SIDS victims we now have a whole new line of investigation opening up that relates to control of structures in the posterior pharynx and the upper airway. These new findings deserve priority investigation.

Now, we have just begun to unravel what might be the underlying events that predispose to SIDS. The effective way to prevent SIDS deaths would not be to put monitors around the country, but rather to find out how the infants' brains got damaged in the first place, and then prevent the damage. Now for the first time we have some fairly good evidence that things have happened in pregnancy that are damaging SIDS victims' brains. SIDS victims have an increased frequency before birth of a disorder called the amniotic fluid infection syndrome. In the disorder, bacteria grow in the fluid around the infant before birth, the infant aspirates the infected fluid, and the infection somehow damages the infant's brain.

We have been finding that infants who survive this kind of infection have long-term mild depressions in I.Q. They have mild mental deficiencies. We think it is responsible for somewhere between 2 and 4 percent of the low I.Q.'s in the United States at the present time.

This disorder is also predisposing strongly to SIDS, so we have some reason to think we may be able to prevent some SIDS if we could prevent this particular form of brain damage.

We have also found mothers who were very anemic in pregnancy have a high frequency of SIDS infants by comparison to nonanemic mothers. Good prenatal medical care offers the prospects of preventing many SIDS deaths when it prevents maternal anemia and amniotic fluid infections by recommending good nutrition during pregnancy.

Now, finally, in my opinion, President Carter's budget proposals are going to have a very serious impact. They are really going to slow SIDS research.

You have heard this evening that a number of SIDS prospective studies have just been started. I don't know how they are going to be fully successful unless more basic types of clinical research go on at the same time, because the more basic types of research are absolutely essential to feed the SIDS clinical projects. If just clinical projects and nothing else is supported we are not apt to get to the bottom of SIDS.

As has already been mentioned, there are many high-priority, approved SIDS projects in this current year that have not been funded, and there will be far more unfunded ones next year if President Carter's proposed budget is actually adopted.

I recommend that the NICHD get $15 million more than has been recommended by the administration for research on SIDS, and for important related high risk problems, like events during pregnancy that are damaging infants, and especially their brains. I think it's absolutely essential that we proceed with such research as rapidly as possible.

You know, in the history of medicine SIDS is a very complicated problem. In all probability it involves the maturation of multiple key systems in the brain. We have begun to find key biochemical abnormalities in the brains of these SIDS infants. The cause of these abnormalities is not going to be simple, it's not going to be solved in one day. Actually, considering how far SIDS research has come in the past 5 years, there has been considerable achievement by the medical research community.

There is no reason to think this progress won't continue. It will be slow if we have stop-and-go funding. Therefore, I recommend that the Sudden Infant Death Syndrome Act be continued for another 3 years, because I think it is an important link in the final solution of SIDS.

Thank you.

[The prepared statement of Dr. Naeye follows:]

STATEMENT FOR THE SUBCOMMITTEE ON CHILD AND HUMAN DEVELOPMENT OF THE COMMITTEE ON HUMAN RESOURCES

U.S. Senate

Re: The Sudden Infant Death Syndrome Act of 1974, PL 93-270

Wednesday, March 1, 1978, 7:00 PM,
Room 4232 Dirksen Senate Office Building

Richard L. Naeye, M.D.
Professor & Chairman
Department of Pathology
M.S. Hershey Medical Center
The Pennsylvania State University
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My name is Richard Naeye. I direct research on the sudden infant death syndrome at the Pennsylvania State University College of Medicine in Hershey, Pennsylvania. A key part of the bill relates to the conduct and support of research on SIDS. I judge it my task to bring the record up to date on what has been accomplished recently in SIDS research and then to briefly outline the prospects for future advances. From such information you should be able to judge the wisdom of retaining provisions for research in the new bill. SIDS remains the most common cause of death in the U.S. between 1 week and one year of age, killing about one in every 500 infants. For a number of years the frequency of the deaths appeared to be decreasing. Now the death rates appear to be holding more steady. Before 1973 it was thought that the deaths were taking place in normal children. Now we know that half and perhaps more of the victims are abnormal, long before death, probably from birth. There are good reasons to think that many of the abnormalities are transient so the potential SIDS victims are well worth saving. Let me briefly review for you some of the key recent findings on SIDS so it will be clear why there are reasonable prospects for both predicting and preventing the deaths.

Dr. Steinschneider started the current era of research on SIDS by finding that several SIDS victims had prolonged periods of stopping breathing long before they died. This has led others to find that more than half of SIDS victims have postmortem evidences of having chronically underventilated their lungs. The underventilation leads to chronic low levels of oxygen in the arterial blood which in turn has led to the finding of another set of chronic abnormalities in the victim's organs at autopsy. More recently, Drs. Shannon and Kelly in Boston found clinical evidence to support this hypothesis in several infants who became SIDS victims.

Other recent as well as older findings indicate that some infants may have a closure of the upper airway as the final, fatal event. Dr. Weitzman in New York has recently visualized such closures and others have demonstrated it indirectly. We know that some infants who become SIDS victims have an abnormal cry and others show some apparent weakness in eating or swallowing. From these clues we have been looking at the brain mechanisms that control these functions and we have recently found a deficiency of nerve cells in that area of the brainstem that controls the tongue in a number of SIDS victims. New investigations are currently underway to follow up this promising lead.

Some progress has also been made in discovering the events that damage the brains of SIDS victims. Several noxious influences have now been identified in pregnancy that appear to predispose to SIDS. These factors include mother's smoking, anemia and amniotic fluid bacterial infections. It is possible that these and other factors temporarily slow the maturing of key areas of the infants' brains that control breathing and perhaps other vital functions.

All of these new findings have been built on much broader research foundations not specifically directed at the solution of SIDS. SIDS cannot be solved in a vacuum. President Carter's recent budget proposals will slow new research on clinical problems like SIDS. A good deal of progress has recently been made in determining the causes of SIDS. Sizable new prospective studies are now starting which will attempt to identify infants at high risk of SIDS. These prospective studies will have a much greater chance of success if the more fundamental types of clinical research also continue, such as those looking for the origins of SIDS before birth. Even under the current year's NIH budget, approved, high priority grant proposals are not being funded.

As you know, President Carter has recommended a larger budget for some special programs at NICHD than for other NIH research programs. Even with these new recommended funds, it is projected that only 40% of approved, competing SIDS grants could be funded under President Carter's proposal. NICHD needs $15,000,000 more than has been recommended by the administration for research on SIDS and important related areas such as high risk factors in pregnancy and their influence on long term mental and motor development. I would also strongly recommend that new research programs be mounted to determine the most effective methods for counseling family members of SIDS victims. There have been some differences of opinions about the most effective methods for such counseling and I think the time is now ripe to find out which methods are best.

SIDS research has made remarkable progress in the past decade. There are good reasons to think that this progress will continue. I recommend that The Sudden Infant Death Syndrome Act be continued for another four years because the act is an important link in the final solution of SIDS.

Senator CRANSTON. Thank you very much.

Dr. CAIN. I am Albert Cain, from the Department of Psychology, University of Michigan. Before anything else, thank you for your invitation and your patience through the long evening, and my congratulations on your stamina.

I am not here to report scientific advances, paralleling those about which you have heard from a number of preceding distinguished witnesses. I am here to urge extension of the authority of Public Law 93-270, and I am here to urge expansion of those authorities, and specifically, to urge an expansion which will include a mandate for and funding of the study of the impact of SIDS deaths on surviving family members, and study of the nature and effectiveness of counseling and a variety of forms of psychological assistance to SIDS families.

While NICHHD has listed behavioral considerations, that is, considerations of SIDS grief reactions, among its priorities, the expiring act, as you know, contains no such mandate. If you look under section 1121(b) to which you referred, it speaks of funds for the provision of information and counseling services to the bereaved, and for research relating to causes of SIDS—but no reference is made to research into the impact of SIDS upon families or the relative and effectiveness of SIDS family counseling.

And while the national institutes have convened some research workshops, the most recent one via a happy marriage with NIMH, to define research issues, priorities, strategies, and relevant methodologies regarding these behavioral considerations, to my knowledge little if any such SIDS research has been funded, little has gone forward.

My concerns are not omnipotent or mindlessly anesthetic ones of creating knowledge whose application could or would spare SIDS parents from all grief and suffering. Such losses are inherently tragic and, in fact, after a while the word tragic in this context becomes a cliche. "Nightmarish, hellish" comes a little closer. The immediate grief, as such, is virtually inevitable.

But what we can and should be far better prepared to do is to reach out in a knowledgeable, informed, sensitive, and caring way to help the self-healing processes of normal mourning from evolving into serious and enduring individual disturbance and family disruption.

I will not, once again, drag everyone here through a long overwhelming list of case examples of SIDS-precipitated heartache, specifying symptoms, family upheaval, personal distress, psychiatric casualty and social breakdown—many poignant reports of which you and your colleagues have heard.

Let me in simple, concrete terms, as a clinician, as well as an investigator into bereavement problems for over a decade, tell you what many of us have seen precipitated by sudden infant death. It includes parents still wracked with incessant, fierce, unnecessary self-accusation and guilt many years later; families literally torn apart by blaming and mutual recrimination surrounding the death; siblings still terrified years later that they, too, will die in their sleep—and, by the way, still convinced that they, too, caused the death; parents with unresolved grief reaction and related depressive disorders a full decade later; mothers so wracked with grief as to attempt suicide, require hospitalization, or plunge heavily into alcoholism; young women so convinced that the death was due to their maternal incompetence that they withdraw from their other children; others too frightened to continue their original plans to bear additional children.

Stated more in the abstract, the damaging effects are not alone those of intense immediate anguish, but often long-enduring disturbance; not only of parents individually but of their marital interaction; not only of parents but of siblings, both present and subsequent and, indeed, of extended family members; not only of psychological experience and social behavior, but also physical distress and symptomatology.

Clearly, on the basis of both the more general bereavement research today, and the all-too-slim but painful SIDS family evidence, the families of SIDS babies are, in public health terms, profoundly vulnerable or at "high risk" for enduring distortions of mourning and bereavement. And surely, on grounds both of intrinsic humanity as well as concern for the personal and social cost involved, this uniquely tragic context cries out for the provision of highly competent, easily-accessible, flexible counseling services.

But if those considerations are at all a powerful rationale for the broad availability of focal counseling services for SIDS families, they also speak equally compellingly of the urgent need to expand the knowledge base on which those services are built.

Let me give you just a quick, selective sense of the kinds of questions I'm talking about. Each individual, family group, or sets of conditions constitute a particularly high risk to post-SIDS disturbance. How are the normal manifestations of grief to be differentiated from early signs of marked and prolonged depressive disorders? What are the natural coping methods under such circumstances, and what facilitates or interferes with their use?

What is, in fact, the extent of individual psychopathology and family disruption precipitated by SIDS? What are the special problems and methods of providing effective services to inner city families, to the socially-isolated and agency-shy family, to the rural family? How can we effectively assist grieving parents to be helpful to their often bewildered and frightened children after a SIDS death?

What are the costs, benefits, and limitations of the various forms of professional, volunteer, and mutual-help services available for SIDS parents? What forms of counseling or related assistance do SIDS families feel have benefitted—or distressed—them most? How can parent mutual self-help groups be most effectively maintained? What forms of service are useless or otherwise contraindicated for which SIDS families?

Which individuals, family groups or sets of conditions constitute a particularly high risk for post-SIDS disturbance?

How are the normal minifestations of grief to be differentiated from early signs of marked, prolonged depressive disorders?

What are the ingredients of more adaptive, successful resolutions of such a loss?

What are natural coping methods under such circumstances, and what facilitates or interferes with their use?

To that earlier committee question of "can we tell if it works?" Let me note that the past couple decades of research into parallel issues of efficacy of interventions indicate that such questions have a way of evolving into something that ends up sounding something like this:

"What types of intervention, at what points in the bereavement process, offered by what kinds of personnel are most acceptable to and effective for which individuals and family consolidations?" A little trickier than "Does it work?"

These are tough research questions, and a notoriously difficult research terrain. The answers, though, will be crucial in our efforts to provide amelioration of unnecessary suffering and primary prevention of enduring, life-crippling disturbance in SIDS family members.

I simply ask that you help begin that task, that long march, in the potential legislation being discussed this evening.

Thank you

[The prepared statement of Dr. Cain follows:]

HEARING STATEMENT: Sudden Infant Death Syndrome Act of 1974 (P.L. 93-270)... U.S. Senate Subcommittee on Child and Human Development - 3/1/78

Albert C Cain, Ph.D.
Professor, Department of Psychology
University of Michigan

I wish to thank the Sub-Committee and its Chairman, Senator Cranston, for affording me the opportunity to share with you my concerns, thoughts and suggestions regarding the S.I.D.S. Act of 1974 (P.L. 93-270) and possible extension or revision of the authorities of that Act. My statement is offered from a number of separate but converging roles:

1) that of a private citizen, who has witnessed among friends the immediate anguish and enduring destructive impact of the death of a child.
2) that of a child clinical psychologist who has variously worked with dying children; with families whose current emotional problems stemmed in large part from continuing disturbed reactions to death of a child some years earlier; on a preventive basis beginning only a few days after the tragedy with S.I.D.S. families as well as those with other forms of infant and child death; and consulted with individuals initiating and maintaining self-help groups for parents who have lost a child.

3) that of a behavioral scientist a significant portion of whose research and writing over the last fifteen years has dealt with various facets of the impact of death upon family members.

In each of those roles, I urge not only the extension but the expansion of the authorities of the 1974 Act, and most specifically I urge broadening the Act's mandate to support research into the behavioral sequelae of sudden infant deaths and the counseling of S.I.D.S. families. Others have addressed themselves, eloquently to the need for funding of broad-guage research into the possible causes of the S.I.D.S. I wholeheartedly support such recommendations, but given the limitations of my own experience and competence, I shall restrict my remarks here to the need for a new Act's specific inclusion of a mandate and financial support for S.I.D.S.-related behavioral research. For, questions of causality aside, the S.I.D.S. has left and daily leaves in its tragic wake devastated, bewildered, grief-racked, often guilt-laden family members -- significant proportions of whom never regain their prior state of well-being or adaptation, and some of whom remain irretrievably crushed psychologically. Whether research into the causes of S.I.D.S. eventually achieves a definitive understanding and all-inclusive prevention of S.I.D.S., or affects but partial inroads, for many years to come S.I.D.S. will continue to wreak its havoc on surviving parents and siblings alike, and for longer still will other infant and child deaths have their psychologically crippling effects on surviving family members.

The overwhelming need for availability of counseling services to S.I.D.S. families, is surely indicated not only by their own searing testimony, but by a burgeoning clinical and research literature demonstrating the frequency of enduring pathological sequelae in many bereaved extending well beyond their immediate anguish upon the loss of loved ones. While the studies range widely in samples, by their nature rarely partake of methodological elegance, are uneven in results and not all of one fabric, the large preponderance of studies of bereaved speak convincingly of the pathogenic potential of a death in the family. The studies of the adult widowed, by way of example, reveal by contrast with appropriate non-widowed comparison groups, disproportionately high mortality, physical illness, specific physical symptoms, hospitalization for physical illness, visits to physicians, usage of alcohol, etc.; and similarly, in these bereaved spouses, a disproportionately high incidence of psychological symptoms and psychiatric hospitalizations. Diverse sets of other studies with various age groups and contexts of bereavement also indicate striking incidence of onset of physical or psychological symptoms subsequent to a loss and/or heightened incidence of prior loss experiences in the early backgrounds of many groups with major psychiatric disability.

Closer to our precise concerns here today, studies of the impact upon family members of lingering terminal illnesses of children are relatively few, are more improvised and gerrybuilt than systematic, and vary widely in their findings -- some ranging as high as a staggering 50% or more of the families having someone requiring mental health services. Pathetically few studies of any form of sudden, unexpected childhood or infant death exist, but virtually all bereavement investigators are agreed that the deaths of young children produce the most profound psychological reactions, are the least 'consolable', are among the very most pathogenic for surviving family members. While comparison of severity of impact between S.I.D.S. and other child deaths is a grim exercise, once again virtually all would agree that the suddenness, the mysteriousness, and the unexpected occurrence in apparently healthy infants make S.I.D.S. deaths particularly devastating, produce unique additional burdens for the bereaved family.

Stated in simple, concrete clinical terms, many of us have seen, precipitated by sudden infant deaths:

--parents still racked with incessant, fierce,unnecessary self-accusation and guilt over the death many years later.

--families literally torn apart by blaming and mutual recriminations surrounding the death

--siblings still terrified years later that they too will die in their sleep.

--parents with unresolved grief reactions and related depressive disorders a full decade later.

--mothers so wracked with grief as to attempt suicide, require hospitalization, or plunge heavily into alcoholism and drug abuse

--young women so convinced that the death was due to their maternal incompetence that they withdraw from their other children or are too frightened to continue their original plans to bear other children

--parents whose relationship with their surviving or subsequent children are utterly clouded and distorted by those unresolved reactions to the infant's death

Stated more in the abstract, the damaging effects are not only those of intense immediate anguish but often long-enduring disturbance; not only of parents individually, but of their marital interaction; not only of parents, but of siblings both present and subsequent; not only of psychological experience and social behavior, but also of physical distress and symptomatology. Clearly on the basis of the all-too slim but painful evidence to date, the families of S.I.D.S. babies are, in public health terms, profoundly "vulnerable" or at "high risk" for enduring distortions of mourning and bereavement. And surely on grounds both of intrinsic humanity as well as concerns for the personal and social costs involved, this uniquely tragic context cries out for the provision of sophisticated, easily accessible, flexible counseling services.

But if these considerations constitute a powerful rationale for the broad availability of focal counseling services to S.I.D.S. families, they also bespeak equally compellingly the urgent need to expand the knowledge base on which those services are built.

It does not and will not long suffice to base our understanding of the impact of S.I.D.S. on family members from data derived from adult losses of a spouse or childhood losses of a parent. It will not suffice to compile endless personal testimony, anecdotal materials, individual case reports, or small samples of psychiatric patients. Required are systematic, methodologically sophisticated studies with broadly representative samples of families who have experienced this tragedy. Such studies, conducted sensitively and within full ethical constraints will focus on key questions like:

--what is the extent of individual psychopathology and family disruption precipitated by S.I.D.S.?

--which individuals, family groups or sets of conditions constitute a particularly high risk for post-S.I.D.S. disturbance?

--what are the typical stresses, vulnerabilities, conflicts, and modes of coping of the different phases of mourning?

--how are the normal manifestations of grief to be differentiated from signs of marked depressive disorders?

--what is the range, sequence and pace of normal grief following an infant death?

--what are the vicissitudes of denial, guilt, defenses against grief?

--what are natural coping methods under such circumstances, and what facilitates or interferes with their use?

--what are the modes of more adaptive resolutions of such a loss?

--what are the divergent styles and pace of fathers' and mothers' mourning, and what issues do the differences impose on marriages?

Separate from such matters is the vital question of the effectiveness of counseling services for these families. Here too we must procede beyond personal accounts pro and con, testimonials, and case reports. So too extrapolations from studies of efficacy of short-term therapies, sector therapy, genetic counseling, widow-to-widow programs, preparatory presurgery counseling, etc. simply will not suffice. The history of our field tells us that the simplistic question "Does it work?" will evolve quickly into far more differentiated research issues. Perhaps they could be stated in the most compressed possible fashion thusly: "What types of intervention at what points in the bereavement process offered by what kinds of personnel are most acceptable to and effective for what problems of which individual or family constellations?" To list briefly a few of the score of related questions:

--what are the special problems and methods of providing effective services to the inner-city family? to the socially isolated, agency-shy family? to the rural family?

--how can we effectively assist grieving parents to be helpful to their often bewildered and frightened children after a S.I.D.S. death?

--to which potential sources of sustenance do S.I.D.S. families turn in the normal course of events, and how can such helping interactions be facilitated?

--what forms of training programs and materials are most effective in preparing various caregivers to assist S.I.D.S. families?

--what forms of counseling or related assistance from what sources do S.I.D.S. families feel have benefitted (or distressed) them most?

--what are the costs, benefits, and limitations of the various forms of professional, volunteer, and mutual-help services available for S.I.D.S. parents?

--what are optimal points in the course of S.I.D.S. loss reactions for offering services?

--how can parent mutual-help groups be most effectively maintained?

--what forms of service are useless or otherwise contraindicated for which S.I.D.S. families?

To state such questions in reasonably crisp fashion is not suggestive of the ease or certainty with which answers will emerge, nor of the ease of conducting such research: notoriously difficult research problems are involved. But twice in the last decade multidisciplinary research planning workshops have been gathered from across the country by N.I.C.H.&H.D. and N.I.M.H., and have reached a marked degree of consensus on key problems and an array of methodological issues regarding research into behavioral aspects of post-S.I.D.S. reactions. The experts came and went, straightforward recommendations were formulated, reports were written. Yet an absolute minimum of such research on either the behavioral sequelae of S.I.D.S. or effectiveness of S.I.D.S. counseling services has been elicited or initiated. And indeed P.L. 93-270 as written, interpreted and administered contains no mandate whatsoever for the study of the human impact of S.I.D.S. losses and modes of ameliorating such reactions. As private citizen, clinician, and behavioral scientist, I urge that you look unblinkingly at the nightmare of this unique human tragedy and its enduring effects, weigh carefully the human misery and social costs involved on your scale of values and priorities. I hope and trust that you will then not only extend the authorities of the legislative Act under consideration, but increase the funding authorized and broaden its mandate to include study of the behavioral aspects of S.I.D.S. losses -- with the preventive intent of ultimately diminishing the tragic suffering of these families, and simultaneously accruing knowledge of likely benefit to the still larger number of bereaved families devastated by other forms of infant and child death.

Senator CRANSTON. Thank you very much.

Dr. Steinschneider?

Dr. STEINSCHNEIDER. I am Alfred Steinschneider, from the University of Maryland School of Medicine, director of the SIDS research program at that school.

By now you have heard much of the tragedy of the sudden infant death syndrome, its magniture and the considerable research progress being made since the National Institute of Child Health and Human Development provided a major initiative under the imaginative leadership of Dr. Eileen Hasselmeyer and Mr. J. U. Hunter.

As a consequence of this initiative and the availability of Federal funding for research, an increased number of highly qualified investigators from a variety of scientific disciplines have directed their energies toward solving this major infant health problem.

Rapidly-accumulating research data have provided for the recognition that may infants who died of SIDS were not the healthy infants we initially thought they were.

These data also support the implication that infants at increased risk might be identified prior to the tragedy, allowing for the possible concentration of preventive measures on a small group of infants.

A number of physiologic and metabolic mechanisms are being investigated which can result in sudden death, and are consistent with the known pathologic and epidemiologic features of SIDS.

A variety of important indices have been discovered which provide the potential for identifying the at-risk infant. Sufficient evidence has been obtained to allow for the reasonable conclusion that respiratory failure during sleep, sleep apnea, is of etiologic significance in at least some of the infants who die of SIDS.

Studies of a suggestive nature have provided the basis for believing that infants prone to develop prolonged and serious apneic episodes might be identified by an indepth examination of sleep physiology. Furthermore, it would appear that the appropriate utilization of home monitoring procedures could reduce the incidence of SIDS.

These, as well as many other studies, all point to the value of that research strategy which allows for the unique contributions of investigators working primarily within their own scientific disciplines. This research approach must continue to receive a high priority. Additionally, all scientifically-sound projects will have to be funded if we are to evaluate adequately and rapidly the significance of some of the more important leads.

However, in addition to this general type of research effort, it will be necessary to provide adequate support for the development of multidisciplinary research programs directed toward common objectives which have the capability of integrating the efforts of investigators from different scientific areas employing a variety of methodologies and techniques.

On September 30, 1977, NICHD awarded a $2.84 million grant covering a 5-year period to the University of Maryland School of Medicine for one such research program. This major research program, which is investigating both biologic and psychologic aspects of SIDS, represents the integrative efforts of almost 25 scientists from the University of Maryland, the Johns Hopkins University, the medical examiner's office of the State of Maryland, and the John F. Kennedy Institute for Handicapped Children.

The research program was designed to provide a prospective examination of a number of proposed prenatal and neonatal risk indicators for SIDS and prolonged apnea, a test of the effectiveness of home monitoring, a simultaneous evaluation of several different etiologic hypotheses, and a study of the psychological impact of both home monitoring and a SIDS death on family survivors.

Based on current research progress and the responsiveness of members from the scientific community, I believe there is sufficient need and scientific commitment to justify the allocation of research funds necessary to develop major SIDS research programs in other areas of the country.

Unfortunately, relatively little scientific progress has been made in our understanding of the psychological and biological consequences of a SIDS death on the surviving parents and siblings. I am aware of very few research studies which have focused directly on this very important problem area.

The improvement of helping-services to family survivors will require the accumulation of a considerably increased amount of objective data. Furthermore, research studies will have to be initiated and funds made available to assess the effectiveness of proposed psychologically-oriented intervention programs. I strongly believe that to accomplish these objectives will necessitate an even greater NICHD effort than is currently being expended.

Information obtained from SIDS research also has begun to influence the clinical care of infants. To an increasing degree, clinicians are becoming aware of and expressing concern for the health of infants discovered to have episodes of prolonged apnea and cyanosis and requiring resuscitative intervention. These infants, as well as those born into a family which had previously lost an infant to SIDS, are believed to be at increased risk to die of SIDS. I hear daily from physicians and concerned parents requesting information on how to and where they might go to have these infants evaluated.

Unfortunately, there are very few locations where such expertise is available and provided clinically. I firmly believe that we must now begin to consider methods by which the Federal Government can assist in the development of clinically oriented infant diagnostic units which would provide the necessary facility and technical expertise as well as the support services essential for those families whose infants are found to be in jeopardy.

Much has been accomplished in the past few years. Public awareness has increased dramatically and the scientific community has assumed a major role in attempting to determine the etiologies of this syndrome and to elaborate preventive approaches.

This effort has begun to yield extremely promising leads. If we are to achieve the ultimate objective of this overall program—SIDS prevention—it is absolutely essential that funding levels be increased to allow for the rapid pursuit of all important leads and for the utilization of essential, albeit costly, research strategies.

Furthermore, since much that is being learned has direct infant health care implications, it is necessary that we begin now to consider the means for delivering these services to infants and families in need.

I thank you.

Senator **Cranston**. Thank you very much.

Most of you have been engaged in carrying out research on SIDS for quite some time. Do any of you have anything to add to what Dr. Naeye in particular said, or anyone else, in regard to educated guesses as to the causes of SIDS?

Maybe you would rather not hazard anything at this point.

Dr. **Naeye**. I think it is clear there are multiple causes, and the more we know, the more we see the complexity of it. It is quite likely that perhaps half or 60 percent of SIDS is due to the apnea mechanism that Dr. Steinschneider first demonstrated. But we now have the other 40 or 45 percent to solve, and we are very sure at this point that more than one mechanism is involved.

Senator **Cranston**. Do you all think the $10.4 million for SIDS primary and secondary research for fiscal 1979 is too low?

Dr. **Steinschneider**. I think it's too little, yes.

Senator **Cranston**. I assume you all agree——

Dr. **Naeye**. It's far too little.

Senator **Cranston**. What do you think an adequate funding level would be, and how much for primary and how much for secondary SIDS research?

Would one of you want to answer that?

Dr. **Valdes-Dapena**. An increase of $10 to $15 million dollars.

Senator **Cranston**. How much for primary and how much for secondary?

Dr. **Valdes-Dapena**. Ten to fifteen for primary.

Dr. **Steinschneider**. I can speak to that in part, because I feel very strongly that as we begin to develop our awareness in the various possibilities in regard to SIDS, it has become increasingly apparent that we are going to have to develop more research strategies that on the one hand are prospective in nature, and on the other hand will also provide for simultaneous evaluation of clues coming from a variety of different scientific disciplines.

Now, these are costly. When we initially costed out that kind of a program at the University of Maryland, it came to essentially just about a million dollars a year, for that kind of integrated program that would utilize scientific resources from different scientific disciplines. It is very costly, especially when you are setting up a prospective study.

So there is no question in my mind that the amount being asked for is inadequate.

Dr. **Naeye**. The real progress that has been made in the last 2 or 3 years has been made by integrating information from many different disciplines. That is where the thing is really taking off and there is no substitute for that.

Senator **Cranston**. Dr. Steinschneider, several years ago the American Academy of Pediatrics took a stand against home monitoring. Has that ever been changed——

Dr. **Valdes-Dapena**. I can speak to that, because I participated in the preparation of the new statement which will appear very soon in *Pediatrics*.

The American Academy has now turned completely aboutface and is perparing a statement for use by pediatricians to the effect that in any suggestive case in which a child is suspected of having episodes of pathologic (unduly protracted) apnea, a differential diagnosis should be undertaken to be sure that there is no recognizable cause. If the child has pathologic apnea of unknown etiology, then he should be monitored.

Senator CRANSTON. What is the cost for at-home monitoring, and who pays? Is it the parents, or third-party payers, or a research project?

Dr. VALDES-DAPENA. I have not participated in that aspect of the issue.

Dr. STEINSCHNEIDER. They range in prices. It averages around $800 to $1,000. The cost is borne by every possible source. I must admit, I have used quite a few, and some of these have been at no cost to the parents, because they were gifts to me.

Third party payers have paid, and parents have purchased them, and parents have rented them.

I think this is one serious problem we're running into—and I was referring to that as one of the areas we really have to get into now, because if we wait for that report which is coming out fairly soon, I think we're going to find ourselves in a hysterical situation.

Infants who need this kind of monitoring, and whose parents will be obligated to buy, or contact the American Academy to get one, will still not have the professional services necessary to follow these infants, nor the support services for the families.

Even though I must admit I was very strongly in favor of it, it frightens me, because we're coming down to this point without the rest of the support services being made available.

Dr. VALDES-DAPENA. Of course, they are mentioned in the statement. I understand there are cheaper monitors, a cardiac monitor which reflects apnea, which comes to $150 to $200. They are said to be effective and efficient.

Dr. STEINSCHNEIDER. I think there's a question about that. The thing that concerns me is that I believe these infants have to go on some sort of monitoring device and a number of clinical questions are going to come up that the local physicians will have very little experience with. There is very little in the literature to help them.

Not only that, when we talk about the need for support services, that's easy to say, but how do you provide that? The practicing physician is receiving very little advice on how to provide that in the real world.

I am saying, unless we deal with that, we are going to be faced with babies—oodles and oodles of babies—going on monitors who may or may not need them, being provided with inadequate kinds of professional assistance, as well as family support.

Senator CRANSTON. Has an adequate, inexpensive at-home monitor been developed, or are we close to such a thing?

Dr. STEINSCHNEIDER. Well, I think there is some controversy over the type of machine surveillance on what would be the most appropriate.

I would say that at this point in time there is no adequate monitor surveillance equipment that has been developed. In part, that comes about because electronics manufacturers have not dealt with that issue, but certainly there are some points of disagreement amongst the users, amongst the professionals, so it is not solely one sided. We're having our own problems.

Senator CRANSTON. Dr. Cain, some people have suggested that we subject counseling techniques used on SIDS parents to the same rigorous, scientific research and evaluation that we normally apply to other forms of therapy.

How do you feel about such a suggestion?

Dr. CAIN. I would indeed suggest that a variety of forms of psychological assistance for SIDS parents be evaluated, as to their effectiveness. I don't know if I would phrase it in the full series of clauses ("same rigorous scientific * * *") which you just did, in the sense that this is a very complex, difficult, research terrain. That research, in a number of respects, will not readily lend itself to precisely some of the same features that more easily quantified, more easily controlled research with less stringent pragmatic and ethical constraints will permit.

But evaluation at a number of levels and on a number of dimensions can be done and ought to be done. No question.

Dr. STEINSCHNEIDER. Could I add to that?

Senator CRANSTON. Yes.

Dr. STEINSCHNEIDER. It's not politics to say, but I think we have been very glib in talking about counseling and providing professional assistance.

I am reminded of the problems that the pharmaceutical houses have when they talk about providing drugs for something as benign as a cold. The drugs are relatively benign, and yet how up tight we get about using drugs.

Yet in spite of the fact that we all agree that the psyche is exceedingly delicate, exceedingly important, we walk rather glibly into it without considering seriously the possibility that what we might honestly believe to be useful approaches might, in fact, do more harm than good. I'm not saying they do or do not. But I think we have to entertain that possibility.

So I would argue that any kind of professional intervention, whether it be on a pharmacologic basis, a surgical basis, or a psychological basis, be scientifically evaluated as best as one can to determine whether or not it is effective, to what extent it is effective, and to what extent it is damaging. I think it's a must.

Senator CRANSTON. Thank you very much.

I will address this question to Dr. Naeye, but if any of you wish to add to it, please do so, perhaps preferably in writing since we're running out of time.

First, is there any indication that subsequent siblings of a SIDS infant have a higher chance of suffering from this same problem?

Dr. NAEYE. Dr. Peterson in Seattle has worked on this very hard, and the general answer is "not much." But there appear to be a few families in which SIDS tends to repeat. So in most cases it does not appear to be a genetic factor, but in a few cases it likely is.

By the way, Dr. Steinschneider underestimated the trouble of keeping the home monitoring equipment running and running properly, and now we've got all those engineers in California who aren't going to build the B-1. Can't some of them build a monitor——[Laughter.]

Dr. VALDES-DAPENA. The risk for subsequent siblings in large series is said to be as high as seven times that for the general population.

Senator CRANSTON. Dr. Dapena, into what areas, heretofore unexplored, do we need to extend our research activities?

Dr. VALDES-DAPENA. Well, I believe Dr. Naeye could answer that better than I. I think first of the biochemical directions——

Dr. NAEYE. Yes, there is no question that early leads have turned up that something is wrong with the neurotransmitters that mediate the electrical impulses from one nerve to another in the brain. This is a very promising area now because the evidence is mounting that higher levels in the brain are responsible for the rhythmic control of breathing. This lead needs to be pursued with great vigor.

I have already indicated that another promising area of research relates to the control of voice and swallowing, and to possible upper airway obstruction.

Senator CRANSTON. If you could go back and try to quantify the area where money could be used effectively, and how much, that would be helpful to us for the record—not now.

Dr. NAEYE. I have always been a pretty fiscally conservative individual in these areas. I have discussed this with a lot of people, and I recommended in my testimony that $15 million be appropriated, extra money, to be appropriated to include not only primary but secondary research. I think that is a very conservative figure.

Senator CRANSTON. Can you relate that just to primary and give us any suggestions——

Dr. NAEYE. I don't favor just giving it to primary for the simple reason that things that look exciting have come from non-SIDS related research. The ability to measure the neurotransmitters, the amniotic fluid story—all come from non-SIDS research. The whole research structure is built on research leads from these areas.

Senator CRANSTON. Let me ask one final question.

From what we now know about SIDS, from research information and a statistical standpoint, what could be done right now to help reduce the number of cases that is not being done presently?

Dr. VALDES-DAPENA. You mean what could be done now in the way of research?

Senator CRANSTON. No, what could be done in terms of action based on what we presently know to cut down on the instances of where SIDS does occur?

Do you want to think about that and submit it in writing?

Dr. VALDES-DAPENA. One of the things that I think has already been mentioned is to increase the awareness on the part of the pediatricians concerning babies who are clearly vulnerable because they're having episodes of apnea, and to pay attention to them.

Dr. NAEYE. I think in the very near future we will be able to make specific recommendations, dietary recommendations in pregnancy to prevent amniotic fluid infections. If we are able to do that, we can likely reduce the frequencies of SIDS.

Senator CRANSTON. Thank you. We will have some other questions in writing for you and the other witnesses.

[The following was supplied for the record:]

V. RESEARCH PANEL

BIOMEDICAL: DR. DAPENA

1. DR. DAPENA, DO YOU, AS A PATHOLOGIST, FEEL THAT MORE CAN BE DONE BY THE MEDICAL EXAMINER IN THE FIELD INVESTIGATING CRIB DEATHS TO ASSIST YOU IN YOUR LABORATORY STUDIES? OR DOES THIS SORT OF COORDINATION ALREADY EXIST?

2.A. IS THERE ANY INDICATION THAT SUBSEQUENT SIBLINGS OF A SIDS INFANT HAVE A HIGHER CHANCE OF SUFFERING FROM THIS SAME PROBLEM?

B. WHAT DOES THIS SUGGEST SCIENTIFICALLY IN TERMS OF CAUSATION? (I.E. A GENETIC TENDENCY OR ENVIRONMENTAL INFLUENCE.)

- -

1. Through the years I have always had excellent cooperation from Medical Examiners in the field. In fact, I am impressed that they are anxious to do whatever they can to help.

2.A. Beckwith has reviewed the reported cases of recurrence among subsequent siblings in 11 published series and declared the somewhat enhanced risk subsequent siblings experience to be less than would be expected were it a mendelian trait.
In Froggatt's series the recurrence rate among siblings was 4 to 7 times the random risk, or between 11.1 and 22.1 per 1000 siblings at risk.

B. Judging from these data it would seem that sudden, unexplained infant death is not genetically controlled. In this regard, Spiers, 1974, report is of particular interest; he discovered that like - and unlike - sexed pairs are equally affected. If the condition were genetically determined like-sexed pairs should experience a higher rate of occurrence than unlike-sexed pairs. His results suggest that environmental factors (perhaps intra-uterine) are more important than genetic.

Marie Valdes-Dapena, M.D.

The Milton S. Hershey Medical Center
The Pennsylvania State University
Hershey, Pennsylvania 17033

Department of Pathology
717 534-8351

March 4, 1978

Ms. Mary Aronson
Room 229
Russell Senate Office Building
Washington, D.C. 20510

Dear Ms. Aronson:

This is a response to your written questions from the SIDS hearings.

#1 - Do you, as a pathologist, feel that more can be done by the medical examiner in the field investigating crib deaths to assist you in your laboratory studies?

Answer - At the present time, no.

#2 - It has been suggested that some type of centralized system be developed for examining certain specimens taken from the SIDS victims.
a. Could you tell us what the design of such a system might look like?

Answer - I do not think a centralized system for the nation would be worth the expense at the current level of knowledge. A pilot project might be worth while if a prime object were to use the data to aid the parents. As the hearings pointed out, systematic studies need to be undertaken to determine the most effective methods or systems of dealing with the parents problems. It has been suggested that a central diagnostic facility could provide information on the mechanism of death of about 60% of SIDS victims. It has postulated that such information might permit the parents to treat the deaths as they would a death from meningitis or leukemia. The postulate needs to be tested before a central diagnostic facility should be seriously considered. To date, almost all the significant information on the nature and origins of SIDS has been derived from the intensive study of a few cases or at most 150 cases. This is not apt to change in the next year or two so I do not think a central diagnostic facility would be very useful for research at its current stage of development.

Sincerely yours,

Richard L. Naeye, M.D.
Professor & Chairman

P.S. The $15,000,000 in extra funds that I recommended in my testimony for SIDS and related research on high risk pregnancies, the fetus etc is about half the sum that various staff members at NICHD think could be profitably used for such projects.

Dr. Albert Cain--Replies to Questions of Senator Cranston

STAFF QUESTIONS

2.A. WHAT INFORMATION DO WE HAVE ON THE EFFECTS OF COUNSELING ON THE BEREAVED PARENTS?

B. HAVE ANY STUDIES BEEN DONE IN THIS AREA?

A.&B. We have few studies of any nature of the effects of counseling on bereaved parents. We have no solid studies of the effects of counseling on appropriate samples of bereaved parents, at best having a few studies of parents of children dying from protracted terminal diseases for whom the general treatment program included parent discussion/'therapy' groups or some form of psychological guidance. At this point, other than extrapolations from the general counseling or bereavement literature, we have only the accumulated wisdom of individual clinicians reporting on an anecdotal, unsystematic basis their experience with bereaved parents.

3.A. HAVE ANY ADEQUATE STUDIES BEEN COMPLETED ON THE EFFECTS OF THE DEATH OF A CHILD ON THAT CHILD" PARENTS OR SIBLINGS?

A number of studies exist dealing with the effect of a child's death upon that child's parents or siblings. Unfortunately many are individual case studies, or quite small samples, or highly biased/special samples (e.g., bereaved families who have sought psychiatric treatment or child guidance services) -- none even remotely approximate systematic, objective studies over time of reasonably representative samples of bereaved families. The most solid --if still severely flawed -- of those studies are, unfortunately, the least applicable to S.I.D.S. sequelae: namely the few solid studies of family responses to the prolonged descent toward death of children with chronic, deteriorative, fatal diseases (e.g., leukemia).

B. IF A STUDY WERE TO BE CARRIED OUT ON THE EFFECTS OF THE DEATH OF A CHILD ON THE PARENTS OF THAT CHILD, OR ON COUNSELING TECHNIQUES TO ASSIST SUCH PARENTS, DO YOU FEEL THE SIDS PARENTS WOULD BE A PARTICULARLY EASY OR A PARTICULARLY DIFFICULT GROUP TO INVESTIGATE? WHY?

In some respects more difficult, in other respects less so -- but given the large intrinsic methodological, pragmatic and ethical problems of research with bereaved parents and siblings, such additional problems as are involved in working with S.I.D.S. families loom relatively small in the total context of these general research problems.

C. DO YOU HAVE ANY IDEA WHAT SUCH A PROJECT WOULD COST?

It is rare that single project suffices for such purposes -- far more fruitful, typically, is a program, a series of interrelated studies over a period of time which build upon each other. The costs would likely run $250,000 - $500,000 per year over four or five years.

4. IT'S BEEN SUGGESTED THAT IMPROVING THE ACCURACY OF A SIDS DIAGNOSIS BY DOING MORE EXTENSIVE TISSUE EXAMS MIGHT BE HELPFUL IN ALLEVIATING THE GRIEF OF THE PARENT. WHAT IS YOUR FEELING ON THIS?

4. I am very doubtful that this in itself would substantially assist in alleviating parental grief. But ultimately this too is an empirical question and could be assessed, perhaps along with the repeated personal, anecdotal statements that full autopsy results are almost always reassuring, guilt-reducing, etc. for S.I.D.S. parents.

Albert Cain

Senator **Cranston**. I want to say at the end of this hearing I am very impressed with the testimony that we have received from our public witnesses in regard to so many aspects of this. It has been very hard hitting, very factual, and I think very persuasive.

I can understand the constraints under which the administration witnesses were required to operate tonight, but I cannot accept the administration's recommendation that we "mark time" or retreat from our intent. I know that so many of you would like us to march ahead with the legislation to extend the SIDS program for multiple years, and to consider improvements in the legislation. And we will do so, as has been suggested by the witnesses tonight.

One improvement, it seems clear, is to authorize project funding which will bring about nationwide coverage over the next 3 years. This would require a doubling of the present effort to about $6 million, with $2 million incremental increases thereafter. I think the testimony tonight—including HEW's—fully supports this approach.

We hope to move ahead as vigorously as we can, and your testimony has given us a lot of ammunition with which to be effectively persuasive.

As to research, although at the present time there is no specific authorization in the legislation, we will consider adding one. Certainly we will urge the Appropriations Committee to provide a substantial increase over the administration's budget request.

Finally, I want to thank each and all of you for staying so late. And those who had to leave for one reason or another, all contributed a great deal. I know many of you came long distances and I want to thank you for that.

I also want to note the presence, right to the end, of the HEW program managers, Dr. Hasselmeyer and Mrs. Norris. We are grateful for their interest and attendance. Your cooperation has been most helpful to us.

We will now do our best, with continuing advice from you, and we feel we can move forward.

Thank you very much.

[Whereupon, at 11 p.m., the subcommittee was adjourned.]

APPENDIX

SERVICES PROVIDED BY THE MICHIGAN REGIONAL SIDS CENTER

The Michigan Regional SIDS Center provides direct service to 49% of the families in Michigan that lose children to SIDS and are available on a consultation basis to the other 51%. We serve the population of Wayne County which accounts for the 49% of deaths even though it only has 27% of Michigan's population.*

1976 STATISTICS

	Population	No. Live Births	No. SIDS	Rate SIDS/ Live Births
Detroit	1,335,085	20,331	88	4.3
Wayne County	2,477,900	35,181	110	3.1
Wayne County (excluding Detroit)	1,142,815	14,850	22	1.5
Michigan	9,104,000	131,378	225	1.7
Michigan (excluding Detroit)	7,769,915	111,047	137	1.2

*Statistics based on 1976 figures.

382

When we first contemplated setting up a SIDS project, we looked at the major problems that existed at that time. One of the most glaring problems was the investigation of cases of sudden infant death and the subsequent labeling of death certificates. Autopsies were not carried out on a regular basis, and the families were not offered immediate information as to the cause of their infant's death.

A letter from the Medical Examiner's Office did go out to SIDS families, but this rarely arrived during the first week following the death. Many families were left during that crucial time wondering if they were indeed responsible for the death of their baby.

Another problem that existed was that many of the babies that died suddenly and unexpectedly were released by the Medical Examiner's Office to local hospitals. Autopsies were often not carried out, and many inaccurate causes of death were entered on death certificates.

Therefore, one of the prime objectives of the project during the first year was to examine very carefully all the deaths in Wayne County of infants under the age of two years that had died suddenly and unexpectedly. In order to carry this out uniformly, it was decided that all the examinations should be conducted by one pathologist.

We hoped to set up a system of handling infant deaths that would serve as a model for other Michigan counties -- and also a system that could function without project staff.

There were some pre-existing positive aspects of the situation in Michigan that I should mention.

Since 1969, Michigan has had a county based medical examiner's system. Although not as effective as a statewide system, it can function as effectively as the local medical examiner allows it. Under the new law established in 1969 the medical examiner has broad discretion in ordering autopsies. He need not ask permission or worry about being sued as can a hospital pathologist who carries out an autopsy without permission.

Another positive feature was established in 1974 when a law (Act 350) authorizing the state to pay for all autopsies of babies that die suddenly and unexpectedly was passed. The parents must request that an autopsy be carried out. Unfortunately, families are not always informed of this right in time to take advantage of it. Many physicians still feel that they are doing the family a service by not performing an autopsy. "Why put the family through more grief" is a common comment made.

There are negative aspects to the Michigan system however. They have a good law and funds for autopsies, but there is no uniformity in the way the law is implemented in the state, and service varies widely from county to county. Each local system functions only as effectively as its local medical examiner. Because the law leaves much to the discretion of the local medical examiner who often has other concerns, such as his private practice, many times autopsies are discouraged. In some sudden infant death cases the families are never given the option of having an autopsy. In later months they begin to question the validity of the diagnosis and focus in on specific problems the baby may have had at the time of his death such as a viral infection and worry that the cause of death may be something other than SIDS.

On the other hand in Michigan, death certificates are still being labeled incorrectly in many cases. Other vague or accidental mechanisms are often listed as the cause of death.

As in all areas the system is only as effective as the persons providing the service.

Therefore, our first aim was to establish a mechanism of uniform handling of cases of sudden infant death with the subsequent identification of cases of the sudden infant death syndrome.

Our second aim was to provide notification of the cause of death to the family within twelve hours by the pathologist who carried out the examination.

Our third aim was to provide immediate help to the family with the concrete problems they encounter after losing a child.

These included help in making funeral arrangements. Cutting red tape in dealing with social services and mobilizing family and friend support systems.

Our fourth aim was to identify specific existing community resources that could provide ungoing counselling to SIDS families.

Fifthly, we wanted to collect epidemiological data about SIDS in our community and, lastly, to provide public and professional education regarding SIDS.

Our office is located in the medical examiner's office building and, therefore, we have the opportunity to talk with the families even before the autopsy is performed. We find that of all the services we provide this is the one that families appreciate and remember. All cases of death of children under the age of two years are referred to our office.

Our project pathologist speaks with the family and informs them as to what his opinion of the cause of death is. This is based on an on-the-scene investigation, talking with the family physician, and talking with the family itself. He tells the family that the only way he can make an exact determination of the cause of death is to do an autopsy.

In the two years since the program started in July 1975, we have handled 353 cases of children under two years of age. Only 10 families have refused autopsies. After the investigation, it was determined that there were 203 cases of SIDS and 150 deaths due to other natural, accidental, and homicidal causes.

After the autopsy is completed, the family is immediately notified by the pathologist who informs them of the cause of the infant's death. An explanation of SIDS is given at this time, and it is emphasized that there was nothing the family could have done to have either predicted or prevented the death.

The same day, a representative of our office calls the infant's physician to inform him of the death of his patient. This contact is followed up with a letter containing several up-to-date articles regarding SIDS. This service has resulted in our correcting several cases of physician misinformation regarding SIDS.

Also, that same day a letter is mailed to the family. This letter offers condolences on the loss of their child, explains what SIDS is, emphasizes that the child was well cared for, and tells the family that a public health nurse will be contacting them. The telephone numbers of our center and the local parent groups are provided, and the family is encouraged to contact us if they have any questions or concerns. The pamphlet, "Facts About SIDS", is also enclosed in the letter.

During that first year we had difficulty involving local agencies with SIDS families. The Wayne County Health Department agreed to provide two nurses on a part-time basis to visit families in outer Wayne County. This excludes the city of Detroit which has its own health department. Detroit had laid off many public health nurses due to budget restrictions and was left with a skeleton staff of about 30 nurses (to cover a population of 1,300,000). They were unable to provide help at that time. The same situation existed in the community mental health agencies. Therefore, during that first year I spend most of my time visiting the SIDS families in the city of Detroit. It was an invaluable experience for me but left me completely drained. During the second year of our project with the handling of the investigation and identification of cases of SIDS already established, we refocused our direction to hiring additional staff to provide direct counselling through the project. We hired three part-time public health nurses to provide this service.

This worked out fairly well, but I was concerned that when and if our project was discontinued there would once again be no available counselling services in the city of Detroit. Therefore, in the third year we decided to contract out for services through the Detroit Public Health Department in the hope that they would continue to be involved even if the funds ran out.

This has been in existance now since March, 1977. Therefore, at the present time, we phone the public health department after the autopsy has been performed and the nurse contacts the family by phone to offer her services and to tell them she will be visiting them in a week.

When the nurse makes her visit, she attempts to correct any areas of misinformation. All families are seen at least three times: at 1 week, 2 months and 1 year; unless they refuse service. However, many families require much more support.

They try to determine if the family is involved with any other caring person who will be able to provide support at this time. The family which is alone will require more support than those who have a sympathetic family or friend on whom to rely.

We have established some guidelines for the public health nurse to follow in counselling the family:

1) She should be aware of the normal stages of the grief reaction (denial, anger, depression, acceptance).

2) She should be understanding of the different rates at which families work out their grief reactions.

3) She should be an accepting individual who is able to encourage open communication with the grieving family.

4) She has to be aware of exaggerated symptomology -- such as not being able to handle day-to-day activities.

5) She has to be aware of the special and different grief reactions that occur with children and help the family to understand them.

6) She has to be aware that the problems facing the family are on-going and are influenced by subsequent problems and day-to-day conflicts.

7) She has to be alert to other problems such as marital conflicts that may occur as a result of the death of their infant.

Other important services provided by our project in the area of public and professional education include:

1) contacting schools of nursing about how they educate their students regarding SIDS

2) participating in police and emergency medical service personnel lectures to inform them about SIDS

3) on-going education of medicolegal investigators

4) public information forums

5) hospital inservice education programs.

So far, the efforts that I have described are centered around carrying out our initial aims of the Michigan Regional SIDS Center. We do have a method of identification, notification, counselling, and education.

Our aims involve the coordination of existing community resources. We deal closely with the medical examiner's office, local health departments, volunteer parent groups, and local public agencies such as the police and emergency service personnel.

At the present time, we have established ourselves as a central clearinghouse for SIDS information. We strive to remain up to date on all current publications regarding SIDS. Items of significant interest include editorials and letters to the editors of medical journals as well as articles in local newspapers.

We have found in our own county that a considerable gap occurs in the medical community regarding the area of research into and understanding about SIDS.

Our future goal is to establish ourselves as a statewide system for SIDS. This is going to be difficult because, as I mentioned earlier, Michigan functions under a locally based medical examiner system -- each medical examiner functions independently. We are currently conducting a study into the way SIDS is handled in the other counties. In this venture we are working closely with the state public health department.

The method which we are using is:

A. We go into each county of Michigan and examine all death certificates of infants who die between one week and one year of age. We find out:

1. What was the diagnosis
2. Who made the diagnosis
3. Was an autopsy performed

If a diagnosis of SIDS was made:

1. How and when was the family notified?
2. Is there a referral mechanism between the medical examiner's office and the health department? if so,

were the families provided with counselling? How soon after and how long were they followed? Were the nurses knowledgable about SIDS, death and dying? Have they experience in mental health counselling? Are they comfortable in this demanding role? Are SIDS families handled by one or two specific nurses or by the nurse in the district?

Therefore, we are establishing who is signing the certificate and how the diagnosis on the certificate was determined. For example, was the doctor a pathologist, and did he conduct an autopsy or just an external examination on the child? How did he interpret his findings?

We are contacting families who lost children in this age group to find out what their experiences have been with their local public agencies, such as the medical examiner's office, police, emergency medical service and public health department.

From this examination, we will assess how SIDS is being handled outside of Wayne County. We will be aware of those counties that already are handling SIDS in an efficient and humane way. We will then concentrate on the other counties.

We will encourage families to write letters of any bad experiences to their state representatives with copies to the local medical examiners. We sent out literature to each Michigan medical examiner stating what medical examiners are obliged to do under the current Michigan law in providing services to SIDS families.

When facilities such as a statewide centralized public health department and medical examiner system do not exist, the expansion to a statewide system for the handling of SIDS becomes more difficult. However, it is not impossible. If an initial local project succeeds in providing an effective method of coordinating services to the public regarding SIDS, then, hopefully, other counties will be more accepting of either establishing such a system themselves or willing to work with the original center to coordinate the handling of SIDS in their own areas.

ADVANTAGES

1. We are able to respond immediately.
2. We see every family that loses a child in Wayne County.
3. Death certificates are accurately completed.
4. We are able to give the parents an opportunity to hold their baby again, and say goodbye for the last time.
5. We provide a coordinated and educational service to the professionals, family and friends of the parents.
6. SIDS and its effect on families is our only focus.

STATE OF MICHIGAN
77TH LEGISLATURE
REGULAR SESSION OF 1974

Introduced by Rep. Damman
Reps. Copeland, Rosenbaum, Raymond W. Hood and Kehres named as co-sponsors

ENROLLED HOUSE BILL No. 5505

AN ACT to amend Act No. 181 of the Public Acts of 1953, entitled as amended "An act relative to investigations in certain instances of the causes of death within this state due to violence, negligence or other act or omission of a criminal nature or to protect public health; to provide for the taking of statements from injured persons under certain circumstances; to abolish the office of coroner and to create the office of county medical examiner in certain counties; to prescribe the powers and duties of county medical examiners; to prescribe penalties for violations of the provisions of this act; and to prescribe a referendum thereon," as amended, being sections 52.201 to 52.216 of the Compiled Laws of 1970, by adding section 5a.

The People of the State of Michigan enact:

Section 1. Act No. 181 of the Public Acts of 1953, as amended, being sections 52.201 to 52.216 of the Compiled Laws of 1970, is amended by adding section 5a to read as follows:

Sec. 5a. When a child under the age of 2 years dies within this state under circumstances of sudden death, cause unknown, or found dead, cause unknown, that death shall be immediately reported to the county medical examiner of the county wherein the body lies, whereupon the county medical examiner shall inform the parents or legal guardians of the child that they may request an autopsy performed on the child, the costs of which shall be borne by the state. An autopsy requested by the parents or legal guardians shall be arranged for by the county medical examiner and the parents or legal guardians shall be promptly notified of the results of that autopsy. The costs of the autopsy performed under this section shall be reported to the state director of public health who shall pay the account to the person entitled thereto out of funds appropriated for this purpose by the legislature. The reasonableness and propriety of all claims and accounts under this section shall be passed upon and determined by the state director of public health. Nothing in this section shall be construed as interfering with the duties and responsibilities of the county medical examiner as defined in other sections of this act.

This act is ordered to take immediate effect.

Thos Thatcher
Clerk of the House of Representatives.

Beryl I. Kenyon
Secretary of the Senate.

Approved ....

....
Governor.

HOUSE BILL No. 5616

October 27, 1977, Introduced by Rep. Rosenbaum and referred to the Committee on Public Health.

A bill to amend section 5a of Act No. 181 of the Public Acts of 1953, entitled as amended

"An act relative to investigations in certain instances of the causes of death within this state due to violence, negligence or other act or omission of a criminal nature or to protect public health; to provide for the taking of statements from injured persons under certain circumstances; to abolish the office of coroner and to create the office of county medical examiner in certain counties; to prescribe the powers and duties of county medical examiners; to prescribe penalties for violations of the provisions of this act; and to prescribe a referendum thereon,"

as added by Act No. 350 of the Public Acts of 1974, being section 52.205a of the Compiled Laws of 1970.

THE PEOPLE OF THE STATE OF MICHIGAN ENACT:

Section 1. Section 5a of Act No. 181 of the Public Acts of 1953, as added by Act No. 350 of the Public Acts of 1974, being section 52.205a of the Compiled Laws of 1970, is amended to read as follows:

Sec. 5a. When a child under the age of 2 years dies within this state

HOUSE BILL No. 5616

5230 '77

under circumstances of sudden death, cause unknown, or found dead, cause unknown, that death shall be immediately reported to the county medical examiner of the county ~~wherein~~ IN WHICH the body lies. ~~, whereupon the~~ THE county medical examiner ~~shall inform the parents or legal guardians of the child that they may request an autopsy performed on the child, the costs of which shall be borne by the state. An autopsy requested by the parents or legal guardians shall be arranged for by the county medical examiner and the parents or legal guardians shall be promptly notified of the results of that autopsy. The costs of the autopsy performed under this section shall be reported to the state director of public health who shall pay the account to the person entitled thereto out of funds appropriated for this purpose by the legislature. The reasonableness and propriety of all~~ OR DEPUTY MEDICAL EXAMINER SHALL CONDUCT OR CAUSE TO BE CONDUCTED AN AUTOPSY OF SPECIFIED TYPE DELINEATED BY THE STATE DIRECTOR OF PUBLIC HEALTH AND REPORT THE DEATH AS A SUDDEN INFANT DEATH SYNDROME WHEN DEATH IS NOT EXPLAINED BY THE AUTOPSY FINDINGS. THE PARENTS OR LEGAL GUARDIANS SHALL BE PROMPTLY NOTIFIED OF THE RESULTS OF THE AUTOPSY BY THE MEDICAL EXAMINER OR DEPUTY WHO ORDERED THE AUTOPSY. THE REPORT OF THE AUTOPSY AND ITS COST SHALL BE SUBMITTED TO THE STATE DIRECTOR OF PUBLIC HEALTH. THE DIRECTOR SHALL PAY THE AMOUNT TO THE PERSON ENTITLED OUT OF FUNDS APPROPRIATED FOR THIS PURPOSE BY THE LEGISLATURE UPON A FINDING THAT THE COST IS REASONABLE AND THE REPORT IS PROPER. ALL claims and accounts under this section shall be passed upon and determined by the state director of public health. ~~Nothing in this~~ THIS section shall NOT be construed as interfering with the duties and responsibilities of the county medical examiner as defined in other sections of this act.

5230 '77

COUNTY OF WAYNE
MICHIGAN

Resolution

PROCLAIMING

"Sudden Infant Death Syndrome" Awareness Week

WHEREAS, *Sudden Infant Death Syndrome, or crib death, is a problem of considerable magnitude in the County of Wayne and represents the single largest cause of death in infants; and*

WHEREAS, *SIDS strikes infants from all races and socio-economic levels, the greatest number of deaths occuring within the inner city which has over twice the national average; and*

WHEREAS, *Sudden infant death syndrome is often called the "mystery killer" because the babies appear to be normal, healthy infants one day and are found dead the next and at this time such deaths cannot be predicted or prevented; and*

WHEREAS, *Some research activity into SIDS has begun it is evident that much more is needed before the cause is isolated; and*

WHEREAS, *The Wayne County Board of Commissioners recognizes that there is considerable need for community education and understanding of SIDS and its devastating effect on families; now, therefore, be it*

RESOLVED, *By the Board of Commissioners of the County of Wayne this 19th day of January 1978 that we hereby proclaim the week of February 6th, 1978 as "Sudden Infant Death Syndrome Awareness Week" and hereby extend our full support to the success of the dinner-dance to be held February 9th, 1978 and called "The First Annual Valentine Benefit for Sudden Infant Death Syndrome."*

John Barr
JOHN BARR
CHAIRMAN OF THE BOARD

George F. Killeen
GEORGE F. KILLEEN
COMMISSIONER, DISTRICT 3

Page 400 contains copyrighted material and is not available for reproduction. "Physicians Must Show Compassion for SIDS Victims' Families," John E. Smialek. Michigan Medicine; v76 n14.

Pages 401 -406 contain copyrighted material and is not available for reproduction. "Toxicology and Sudden Infant Death," J. E. Smialek and J. R. Monforte. Journal of Forensic Sciences; v22 n4 pp757-62, 1977.

BEREAVEMENT RESOURCE ASSOCIATION

400 E. LAFAYETTE ST.
DETROIT, MICHIGAN 48226

Bulletin #15 March 1978

The Bulletin is published by the Bereavement Resource Association, a private association of professional and volunteer persons with a common interest in Bereavement Counselling. Any person sharing this interest is invited to join. An $8 annual fee entitles you to membership and subscription to the newsletter (Sept-June). This fee can be waived upon request to the EXECUTIVE COMMITTEE. If you hear of a meeting, group, or event that might be of interest to our readers, please share it with us by calling 963-1528.

EXECUTIVE COMMITTEE

William Jones	PhD	Oakland University/Dept of Ed.	377-4161
Harriot Sarnoff-Schiff			646-9508
Judy Shell	RN	Harper-Grace Oncology Unit	494-6031
Zoe Smialek	RN	Michigan SIDS Center	963-1528
Ann Stinson	FD	Stinson's Funeral Home	894-0448
Bob Wollard	Rev	St. Gabriel's Church	775-4450

ASSOCIATION MEETINGS

Unless otherwise noted, meetings will be held at Children's Hospital, 3901 Beaubien Boulevard, Detroit, on the third Thursday of each month.

MARCH/78: 12:00-2:00 Children's Hospital Auditorium. This month will comprise of a sharing of literature and audiovisual materials in the field of death and dying and bereavement. Please call 963-1528 for further details.

Nonmembers are welcome and are asked to call 963-1528 if they plan to attend an Association meeting to ensure adequate accommodations. A $1 donation is asked at each meeting to help cover costs. Cafeteria priviledges may be used before the meeting if the auditorium is used.

If there is a particular area of bereavement you would like to see covered, please share this with us.

SUPPORT GROUPS MEETING MONTHLY

BEREAVED PARENTS GROUPS

1st Tue.	SIDS PARENT GROUP MEETING: 8-10pm For families who have lost a child to sudden infant death syndrome (SIDS). Meetings held at Children's Hospital of Michigan, 3901 Beaubien Blvd., Detroit. For further information call Mrs. Zoë Smialek, Project Coordinator, Michigan Regional SIDS Center 963-1528.
1st Wed.	FIRST SUNDAY - WEST SIDE: 8pm For parents who have lost a child to any cause. Gabriel Richard Center, 4901 Evergreen, Dearborn (on U of M Dearborn campus). For information call Virginia O'Shea at 427-5138 evenings.
2nd Tue.	SOCIETY OF COMPASSIONATE FRIENDS: 7:45pm Parents who have lost children at any age and from any cause. Civic Center Parks & Recreation Building, 26000 Evergreen, Southfield. Mail inquiries to: P.O. Box 181 LV, Lathrup Village, Michigan 48075.
2nd Wed.	BEREAVED PARENTS GROUP: 8-10pm Support group for bereaved parents. Fisher Center on Providence Drive, Southfield (directly behind Providence Hospital). For information, call Sr. Mary Ruth at 424-3209.
2nd & 4th Wed.	FIRST SUNDAY - EAST SIDE: 8:30pm Parents who have lost a child to any cause. St. John Hospital, 22101 Morross, Detroit (Educational wing - ground floor). For information, call 521-7129.
3rd Fri.	FIRST SUNDAY - ROYAL OAK: 8pm Parent support group. Shrine of the Little Flower, Woodward at 13 Mile Rd., Royal Oak. Call Ann Flaharty at 543-9671 for further information.
4th Wed.	FIRST SUNDAY - MILFORD: St. Mary's, 1851 East Commerce, Milford. Call Sr. Celeste Schoppy at 685-9161 for further information.

BEREAVED PERSONS GROUPS

Every Weds	NEW BEGINNINGS: for any person that has experienced a loss through death of a signifigant loved one. St. David's Episcopal Church Marquette St., Garden City. Group leader Bob Weikart BA BD Call 864-5400 ext 229 for further information.

GROUPS FOR WIDOWED PERSONS

3rd Sun	ST. COLUMBAN'S MEETINGS FOR WIDOWS & WIDOWER'S: 3:00-5:00 PM St. Columban Church - 1775 Melton, Birmingham. Call 646-5224 for info.
3rd Mon	WIDOWS TOGETHER: 12:30-3:00 PM Lectures & informal discussion. Serf Credit Union (lower level), 18441 Utica Rd Roseville. Call Greg Povlitz 775-2424 (Kaul Funeral Home) or Women's Resource Center, Macomb County Community College 779-7417 for further information.
1st Tues	*WIDOWED PERSONS: (men & women) 7:30 PM Mercy Center 28600 Eleven Mile Rd. (between Middlebelt & Inkster) Farmington Hills. Call Jean Feterl for further information, at 476-8010.
2nd Tues	*WISER-LIVONIA: 8:00-10:00 PM monthly programs on various topics of interest. Schoolcraft College, 18600 Haggerty Rd. (near 7 mile Rd) in Livonia. Room B200-210 Liberal Arts. Call Newman House 464-2160 for further information.
3rd Tues	*WISER - GARDEN CITY: 8:00-10:00 PM Informal discussion and lecture programs. Good Hope Lutheran Church, 28780 Cherry Hill, Garden City Call Pat Shea at 427-3800 for further information.
3rd Fri	WIDOWERS: (men only) Admission $2 refreshments served. Mercy Center 28600 Eleven Mile Road, Farmington 48024. Group leader Bob Weikart. Call Jean Feterl at 476-8010 for further information.

OTHER SELF HELP GROUPS:

LIVING WITH CANCER: 7:30 PM by the American Cancer Society 336-0030 (2 location

1st Thurs	Grosse Pointe Woods Presbyterian Church, 19950 Mack Ave. (at Torrey Rd) Grosse Pointe Woods Michigan.
3rd Thurs	Westminister Presbyterian Church, 17567 Hubbel (at Outer Dr.) Detroit.

* For topic of monthly program see under Special events on back page.

CURRENT EVENTS OF INTEREST:

March 2/78	THE CAREGIVERS: THERE WHEN YOU NEED THEM : Panel presentation with Dr. Thaddeus Zwirkowski, Mr. David McCabe, Ms. Judy Shell. Cost - $2.50. Call Jean Fererl at 476-8010 for info. Time - 8:00-10:00 PM Place - Mercy Center ^8600 11 Mile Rd.
March 3/78	LIFE IS NO BRIEF CANDLE TO ME: Two presentations a)"Wills" b) "Coping with Death and Grief" Speakers - Mr. A. Jackman, & Mr R. Brzezinski. Cost - Time - 12:00 - 6:15 Call Sr. Martin Ann Stamm - 425-8000 Ext. 22 for info.
March 9/78	A HEALING COMMUNITY: Speaker Dr. Bruce Danto Cost - $2.50 Time - 8:00-10:00 PM Place - Mercy Center 28600 11 Mile Rd. Call Jean Feterl at 476-8010 for further information.
March 17/78	LIFE IS NO BRIEF CANDLE TO ME: "Psycho-Theological Aspects of Death" Speaker Rev. Philip O'Dwyer and another to be announced. Time - 12:00 - 6:00. Call 425-8000 Ext. 22.
March 17-19/78	CHILDREN AND DEATH: A conference for Educators and Clinicians. Sponsored by the University of Chicago, Wyler Children's Center and the Center for continuing Education. Begins Fri evening and ends at noon on Sun. For information contact the Center of Continuing Educ. 1307 E. 60th St., Chicago Ill 60637. Cost - $125.00

SUDDEN INFANT DEATH --

A PROFESSIONAL'S PERSONAL VIEW

Zoë Smialek, R.N.*

PENDING PUBLICATION PEDIATRICS

*Project Coordinator
Michigan Regional SIDS Center
400 East Lafayette Street
Detroit, Michigan 48226

These observations were made possible through the United States Department of Health, Education, and Welfare grant #MCH 000005 01 0

In the case of sudden infant death, meaningful professional support to the parents in the early hours of bereavement cannot be overestimated. This is especially true since family members seeking to provide support for their relatives may, despite good intentions, increase the parents' distress over the unexpected loss of their infant. Even health professionals, such as emergency room nurses or family physicians, can allow their personal fears of death and failure to interfere with helping the family to cope during this time of confusion and pain.

Effective support of families necessarily requires some degree of sharing of their grief. This can be an anxiety-filled experience for the health professional unfamiliar with this role. Even for the trained and experienced counsellor it is an emotionally draining experience.

The observations recorded in this account were obtained from 351 families over a two year period, all of whom lost a child less than two years of age. All deaths were sudden and unexpected and came under the jurisdiction of the medical examiner.

The families were seen within 24 hours of the death of their child, usualiy before an autopsy was performed; therefore, many times the cause of death was still unknown.

Of all these deaths after autopsy 75% were diagnosed as the Sudden Infant Death Syndrome with the remaining 25% due to other natural, accidental, and homicidal mechanisms. It is interesting to note that the final mechanism of death does not measurably alter the way the loss affects the family, e.g. parents of abused children are often just as distraught as those parents whose children died naturally.

Although many of the families are followed for up to several years following their loss, the reactions described are immediate ones, and the specific interventions suggested are those that families later remember as positive.

IMMEDIATE REACTIONS OF PARENTS

In order to help parents at this time, it is important to appreciate the feelings they are experiencing and how those feelings are released. In other words, "where they are coming from" and "where they are at."

Kubler-Ross in her classic "On Death and Dying" describes common reactions seen in dying patients (Denial and Isolation; Anger; Bargaining; Depression; Acceptance.) She refers to these reactions as stages through which one passes before the final acceptance. Similar reactions occur in the survivors of the deceased.

In these early hours after the loss, a flood of feelings encompassing all of the "stages" is often seen. Therefore, it is best to be prepared for almost any type of reaction although in those first few hours after the death the feelings of shock and disbelief predominate.

Shock, Disbelief, and Denial: Family members appear in a state of shock, pale and withdrawn, often with an apparent lack of affect. They seem to hear what you say, but in later interviews, it is clear that they "absorbed" very little of what was said. Therefore, just sitting with the family to answer any questions asked and listening to any feelings expressed is an effective approach.

Some feelings that I have heard expressed include:

> "This really can't be happening to me ... I think it must be a nightmare, and I just wish I would wake up."
>
> "Why can't I just take my baby home?"
>
> "She can't be dead; I love her so much she just can't be. Please don't let her be dead!"
>
> "I just want my baby back again."
>
> "Please let this be a bad dream."

Negativism and Hostility: Although negativism and hostility most often appear later in the grief reaction, they may be evident within the first few hours. Families who have not yet accepted the death cling to the body of the child they still perceive as alive. They vocalize negative feelings about an autopsy and say things such as:

> "Don't you dare touch my baby!"
>
> "You're not cutting my baby up."

The feelings of hostility may be all encompassing and include reactions against physicians.

> "All that doctor is good for is sending out his bill."
>
> "I told him my baby was sick, and he didn't believe me."
>
> "All he did was send his interns in there -- he never went himself."

All families are told that a public health nurse will be visiting them in a few days to answer any questions they might have about their infant's death, and this may be met with the reaction:

> "What good is she now? She can't bring my baby back."
>
> "She's the one that told me my baby was well."

Self Reproach and Guilt: Feelings of guilt and self reproach are very common. However, parents at the medical examiner's office do not often vocalize these feelings easily due to the fear of being blamed for the child's death. They may disguise the circumstances surrounding the death of the child if they feel that they contributed to the death in any way; the following case illustrates this:

> A young adolescent mother had her baby in bed with her when she discovered that he was dead. She returned the baby to his crib before reporting the death. Subsequently, she felt the medical examiner's office investigation was invalid because they were operating on incorrect information. This concern could not be verbalized for several weeks, until she attended a meeting of parents who also lost children.

One useful approach to this problem is to say something like "Parents often blame themselves when their baby dies like this" and then wait for the family to respond, either denying or acknowledging these feelings.

It is vital to identify and clarify any misconceptions and, thereby, alleviate guilt feelings before they are reinforced.

Identification of Former Unresolved Guilt: In many families it has been the grandmother rather than the mother who shows the more pronounced grief reaction. This is appropriate if the grandmother has been the primary caretaker of the child. In some instances, however, it becomes apparent that the grandmother is only mildly concerned with the death of her grandchild, but rather deeply grieving over the loss of a significant loved one in her past. One grandmother had never forgiven herself for the accidental drowning death of her own teenage son. She had been unable to grieve and express her feelings at the time of her loss as she had had extreme feelings of guilt about allowing her son to go swimming alone. However, when her daughter lost her baby, she broke down and they grieved together over their separate losses.

Another grandmother was seen holding herself and rocking from side to side, crying and saying someone's name over and over again. The name was not the same as her recently deceased grandchild. It turned out that she had lost an infant at around the same age as her grandchild, and his death brought back all the acute feelings of pain and loss that she had experienced when she lost her own son.

It is, therefore, important to realize why someone is grieving and what the object of their grief is in order that appropriate support be offered. It cannot be assumed in all cases that the grief is only related to this infant having died suddenly.

Previous Fears of Loss: Some families verbalize past premonitions surrounding the death of their child. Such parents may be in need of psychiatric help.

One father saw an image of his son dead in his casket superimposed while viewing his son in the newborn nursery. He did not share this fantasy but anticipated each day that the baby would die. He tried to protect himself from this fear by detaching himself emotionally from the infant. When his son died, he immediately dismantled the nursery and converted the room into a den. He required continued professional support since his own parents were certain that he had never loved the baby and was glad when he had died. Unfortunately, this father has continued to have problems and refuses help.

A similar reaction occurred in another family. The father was so sure that his son was going to die that he was too frightened to check on the baby in his crib. After the death, he experienced extreme relief and said that now he could go on to plan for his future and have other children. Unfortunately, this family refused further intervention and moved from the area.

Relief: Not all children are wanted or loved. Some children are an emotional and/or a financial burden to their families. One young unmarried mother of three told me she had been managing just fine with her two previous children, but when the third child was born it was more than she could handle. She said to me, "God must have known that I couldn't stand it for one more day so He took her to be with Him."

In such instances, I believe it is important to emphasize the physical reason for the infant's death and de-emphasize the thoughts that she wished the child dead. At some later point this could be a potential source of guilt and self-recrimination.

FAMILY NEEDS AND MANAGEMENT

Need to be Reunited With the Loved One: It is a common experience for families that have lost a child suddenly in the home to have the body whisked away either to a hospital emergency room or to the city morgue. Many emergency rooms have an unwritten policy that parents should be separated from a dead child. As a result they do not allow families to see the child again in hospital. Therefore, when they come to the medical examiner's office it is often their first opportunity to say goodbye to their baby. If families indicate this need, it is important that this service be provided to them. Both the autopsy and subsequent embalming procedures would preclude the suitability of handling the child at a later time. Families usually make this need immediately apparent by verbalizing in the following manner.

> "I've got to see him again!"
>
> "Please let me hold her. They wouldn't let me see her in the emergency room. I just wanted to say goodbye and touch her again, but they wouldn't let me. She's my baby!"
>
> "The nurse said that there wasn't anything that I could do now and they needed the room for other patients."
>
> "I went into the chapel to be alone, and they asked me to leave because service was scheduled."

One adolescent girl, her mother, and her aunt came to the medical examiner's office to identify her baby. They all expressed the desire to hold the baby again. After I explained to them that the baby would no longer look or feel the same, they still wanted to do this. Therefore, I prepared the child and accompanied the family to view their child. They spent one half hour with their baby, holding her, rocking her, and talking to her. All four of us were crying as the mother talked to her baby about all the things she wanted for her and what she thought she would be when she grew up. What impressed me the most about the situation was that initially, as she was talking to her baby, she said things like, "You know Mummy loves you, don't you, Sweetheart? You know I take good care of you." And then as time went on, she changed to the past tense and said to us, "I took such good care of her, and I loved her so much." It was as though she finally realized the reality of the situation. They all then kissed the baby goodbye, hugged me, and went home.

As this was the first time this had been done at our office, I encountered resistance from the staff. One pathologist told me after it was over, "It is best if you don't do that again; it is too hard on the family."

Even if families do not verbalize the wish to see or hold their baby, it can be helpful to let them know this is available to them. Families phone back months after the death thanking me for the opportunity of spending time alone with their baby. When they are prepared for the changes that take place after death, they usually do not even see the distortions. You hear comments such as:

> "Isn't he beautiful?"
>
> "He just looks like he's sleeping."
>
> "Look at the smile on his face."

Fear of the Dead Body: Other families do not wish to see their child. They are concerned about the way the child will look and feel. Other concerns include the fear of "falling to pieces" if they see the child dead.

> "He looked so awful when I found him I couldn't stand to see him looking like that again."

> "I just want to remember him as he was."

> "I think it is best if we have a closed casket."

> "If I see him again, I'll start to cry." Is it so bad to cry? "If I start, I'm afraid I'll never stop."

Clarification of Misconceptions: At times, the viewing serves as a forum to answer any questions about the changes that occur in the body after death.

> "Why is his mouth hanging open?"

> "What are those marks on her face -- will they go away?"

> "What is that frothy stuff coming out of her nose? Why does it keep coming out?"

> "He doesn't look the same."

At other times, concerns about autopsies can be discussed. Many professionals as well as lay persons have negative thoughts and unrealistic concerns surrounding the autopsy. Some of these concerns are verbalized.

> "Can I still have a funeral and show the baby?"

> "Will he be mutilated?"

> "What exactly is an autopsy anyway?"

Unfortunately, these negative feelings are reinforced by some physicians. We have seen examples of physicians covering up the circumstances of the sudden and unexpected death to "protect" the family from the subsequent investigation and autopsy. Many months later, we come in contact with the family because of their extreme feelings of guilt and self blame. Unfortunately, it is then too late to be able to answer the inevitable questions the family has about why their baby died. One pathologist even told a family that they shouldn't have an autopsy because then they would have to have a closed casket at the funeral.

Because of the flooding of feelings of anger and disbelief, many times families are unable to hear or understand detailed explanations. Therefore, it is best to answer all questions as simply as possible -- write down for the parents any necessary information that must be remembered. As well, give your name and telephone number on a card so parents may contact you for later clarification of any points that may arise.

Male Need to be "Strong": In times of stress, often the male of the family is expected to be the "supporter" or "strong one". He is frequently seen at the medical examiner's office sitting very stiffly with his arms folded across his chest and his face a mask, trying to control his feelings.

I find it very helpful to comment on how I see him and how difficult it is to be like that with so much pain inside. I then say that it is important that he allow himself to express his feelings and that is is alright to cry. Many times the tears have already started to flow and along with the tears comes a flood of thoughts and fears that up until now have remained supressed.

> "I was away on a business trip; my wife had to handle everything herself."
>
> "I should have spent more time with the baby."

The Funeral and Social Services: Families are frequently turned away from hospital emergency rooms and medical examiner's offices without talking to anyone who can answer their questions about "What do I do now?" Some families require help in relating to social service agencies. In the inner city, many families are on "Aid to Dependent Children" (ADC) or other welfare programs and need to notify their social worker about the death. It is then necessary to go down to the main social service office to complete the required forms to qualify for the $95.00 allotment for a burial through the county. Families are not allowed to supplement this amount to provide extra "frills". They are required to sign a form stating that any money they receive from other friends and relatives to assist with the burial will be automatically subtracted from the $95.00. It saves families time and frustration if these restrictions are explained to them before they go to the trouble of making the trip downtown to the social service office. If this type of funeral arrangement is unacceptable to them, they may have other resources such as friends or church members who can take up a collection.

Other times, families just having lost an infant and being poor must travel on public buses. They are often in a complete "daze" trying to make arrangements to bury their child. As mentioned, they have to go to the social service office to fill out the necessary forms and then to the funeral home to make "the arrangements". Sometimes it is only there that they realize the extent of the welfare restrictions. I try to determine if they have friends or neighbors able to assist with transportation, and if all else fails, I take them myself to the social services office and the funeral home. On several occasions, I even went with the mother to the cemetery when she could not get any of her relatives or friends to accompany her.

Families also have many questions about funerals such as the suitability of an open casket, the value of a "viewing" or the necessity of a religious service.

The Surviving Siblings: Another important area of concern is the surviving siblings. Families worry whether or not they should be included in the funeral and how this should be handled.

I usually advise the parents to ask the children if they want to attend the funeral, and if they do, to have a friend or relative be responsible for removing the children if they become too uncomfortable or anxious. As well, the children must be informed of the purpose for the funeral, what death is, and what to expect.

I always ask the family what they have told their other children about the death of their infant sibling. We then talk about a positive way to explain to the children about the death, taking into account the child's age, the way the sibling died, and the family's personal and religious beliefs. In this way I hope to decrease some of the common and potentially harmful ways of explaining death to children such as:

> "He just went to sleep."
>
> "He was so perfect that God took him for an angel."
>
> "He went to be with God because God wanted him."
>
> "She died because she was sick."

I try to concentrate on the physical reasons for the death and use words other than the common ones such as "sick" that could later apply to the surviving children. I also emphasize that the other children will not die the same way the baby died. If the children are with the mother they can be questioned directly, and many fantasies uncovered. When children are asked why their infant sibling died many misconceptions are revealed.

> "He died because he was bad -- he wouldn't stop crying."
>
> "Mommy dropped him on his head."

"I hit him."

"God wanted him."

Maintenance of Family and Other Social Interactions: If an open unpressured atmosphere exists, individuals will begin to talk about their concerns. If they remain aloof and withdrawn, it is likely you have not yet recognized their particular needs.

One adolescent mother who was a narcotic addict was initially very unresponsive. After I had spent one-half hour with her, she still had not looked at me. She responded to my questions, but refused to be drawn into conversation. Finally, I put my hand on her arm and said, "You know you could have been married, made $20,000 a year, never taken drugs, and still lost your baby this way." She looked at me and said, "If I get my family, will you tell them that?" When I agreed, she left the building and came back with five people including her parents and boyfriend. I repeated to them what I had said, and they took turns holding her before they all left together.

Severe self-recrimination must be recognized if appropriate assistance is to be given.

Grief as an Individual Reaction: Grief is a personal feeling in response to a loss, and, therefore, persons in the same family differ greatly in their grief reactions. They express their grief in different ways and at different times. Therefore, it helps to prepare families for this reality at an early time so that bitterness and resentment does not develop between family members.

CONCLUSION

Services that should be provided to newly bereaved families experiencing the loss of their infant suddenly and unexpectedly include: 1) open acceptance of individual grieving reactions, 2) opportunity for vocalizing feelings, 3) clarification of existing misconceptions, 4) allowing the family time alone with their dead infant, 5) provision of a quiet, private place to be alone, and 6) an adequate explanation of the cause of death.

Also, concrete help can be offered such as: 1) help in making funeral arrangements, 2) cutting red tape through social services, and 3) transportation services.

Most importantly, however, it cannot be overemphasized that the person providing this assistance be a warm, caring individual who has, at least partially, come to terms with his or her own feelings about death, is aware of normal grieving patterns, and can handle, without personal affront, expressions of hostility and anger as well as anxiety and extreme sadness. It is important that we do not project onto a family what we think they should be experiencing, instead of assessing exactly what they are feeling.

Assistance to families should be directed toward decreasing feelings of isolation and rejection by family and friends. Families should be informed of community resources that can provide support during this stressful time. In these ways, many potential family disasters can, hopefully, be prevented in those early hours following the death of their infant.

Pages 429 and 431-436 contain copyrighted material and are not available for reproduction.
"Methadone Deaths in Children: A Continuing Problem," John E. Smialek; and Others. JAMA; v238 n23 p2516-17 Dec 5, 1977.
"Accidental Beth Deaths in Infants Due to Unsafe Sleeping Situations," J. E. Smialek; and others. Clinical Pediatrics; v16 n11, pp1031-36 November 1977.

New Mexico Sudden Infant Death Syndrome Information and Counseling Project

Two-Year Summary

July 1, 1975 - June 30, 1977

The New Mexico Sudden Infant Death Syndrome Information and Counseling Project commenced July 1, 1975. It is the result of a solicited request to the Department of Health, Education, and Welfare, and is a three-year grant, renewable annually, funded by the Department of Health, Education, and Welfare, the Department of Public Health, and the Maternal and Child Health and Crippled Children's Service. As the name implies, there are two principles for the Project:

1. Education about the disease for both professional and lay persons, and
2. Grief counseling for those families in which a "Crib Death" has occurred.

The third, unstated goal is the performance of an autopsy according to agreed upon guidelines on all infants suspected to have died from this condition.

During this two-year time period there were 89 diagnosed cases of SIDS in the State of New Mexico. There were a total of 705 resident infant deaths, 251 of which were post neonatal deaths. In this group there were 143 cases of sudden, unexpected death, all of which were autopsied, and 78 of which were confirmed SIDS with death certificates so issued. Eleven additional cases which were not autopsied, because of strong personal, religious, or cultural prejudice against the procedure, were also diagnosed as SIDS based on limited examinations and history. These latter cases were issued death certificates stating the cause of death as "Consistent with SIDS." Grief counseling was offered to all families in which a "Crib Death" occurred.

In each SIDS case a personal letter was sent to the family extending sympathy from the Medical Investigator, describing some pertinent facts about the disease, and listing the names, addresses, and telephone numbers of several SIDS trained persons in their area of residence who could be called upon for help. These letters were followed by in-person counseling attempts, some more successful than others, by the local community Coordinator. Data for these counseling activities and reopened cases in which a SIDS death occurred prior to the grant period include:

Families receiving at least one telephone call	109
Families receiving no home visits	11
Families receiving at least one home visit	22
Families receiving at least two home visits	22
Families receiving three or more home visits	54

Of the above 109 cases, there were 22 cases which were closed during the past fiscal year. Of these, four families withdrew, three were referred to other SIDS projects in the states to which they had moved, and twelve were unlocatable because they had moved and left no forwarding addresses.

Professional education has been accomplished by holding eighteen symposia in designated communities throughout the State. These communities were selected based on population base, availability of health professionals in the adjacent areas, and existence of a hospital or clinic. Sites for these Symposia and pertinent data include:

City	Date	No. Attended	City	Date	No. Attended
Hobbs	10/8/75	150	Socorro	5/25/76	32
Clovis	11/6/75	130	Silver City	5/12/76	38
Roswell	12/3/75	143	Deming	11/11/76	66
Las Cruces	1/13/76	85	Las Vegas	1/11/77	87
Farmington	2/18/76	150	Alamogordo	2/10/77	114
Gallup	3/3/76	100	Albuquerque	3/17/77	75
Espanola	3/17/76	136	Grants	3/30/77	48
Tucumcari	4/6/76	62	Carlsbad	5/20/77	93
Albuquerque	4/21/76	400	Los Alamos	6/30/77	83

A further breakdown of those who attended these Symposia, a total of 1,992 persons, indicates a variety of interested health professionals, paraprofessionals, and those in the helping professions, as listed below. The cross section indicates the range of interest in this disease statewide.

Profession	Number	Profession	Number
Physicians	74	Nurses	938
Physician's Assistants	31	Students	201
Mental Health Workers	7	Emergency Medical Technicians	23
Law Enforcement Personnel	35	Red Cross Workers	2
Clergy	37	Fire Service Personnel	1
Family Nurse Practitioners	3	Funeral Directors	3
Pharmacists	3	Midwives	2
Health Administrators	1	Drug Abuse Counselors	2
Orderlies	3	Laboratory Technicians	3
Educators	20	Nurse's Aides	9
Dieticians	1	Respiratory Therapists	1
Hospital Auxiliary Personnel	1	Medical Investigators	25
		Receptionists/Secretaries	10
Housewives	3	SIDS Parents	3
Press	5	Other	442

Other professional education activities include sessions ranging in length from one to three hours, but occasionally up to nine hours, for groups such as the SIDS community Coordinators, Home Health Care Agency Staff, The University of New Mexico Departments of Health, Education, Psychology, and Guidance and Counseling, the College of Nursing, the Law School, Maternal and Infant Care Project staff, Police Departments in selected cities statewide, paramedics, Mental Health agencies, BCMC staff physicians, Office of the Medical Investigator staff, pathologists and laboratory employees, hospital employees, Ministerial Alliances in selected cities, County Medical Societies, The University of Albuquerque, respiratory therpists, public and private school teachers, and funeral directors.

During the grant period there have been approximately 96 education sessions for specific professional groups attended by 1,958 persons. Thus, a total of 3,950 health professionals and paraprofessionals have participated in 114 separate sessions over a two-year time period.

Education programs for the lay community include such groups as the New Mexico Sudden Infant Death Syndrome Information and Counseling Project Community Council, the New Mexico Chapter of the National Sudden Infant Death Syndrome Foundation and new SIDS parents, the Foundation Board, University of New Mexico Alumni, high school students, Church

Sisterhoods, women's service organizations, men's service organizations, hospital auxiliaries, media personnel and their particular audiences, business and professional women's groups, and interested individuals from a given community. These sessions range in duration of time from half an hour to nine hours, and an approximate two-year total of attendance for these groups equals 2,531 persons at 43 sessions.

In an effort to be both brief and concise, these items do not reflect every one-to-one or small group meeting with professionals, paraprofessionals, or lay persons. Some ongoing activities not documented in detail include discussions with individuals serving on the Project Community Council, counseling sessions with individual Coordinators on a regular basis, grief counseling provided in cases of non-SIDS deaths, supplying of literature to agencies and individuals, and serving as a resource to agencies such as the Cancer Research and Treatment Center, concerning community development, the School of Medicine and the College of Nursing. Additional undocumented activities include serving as a consultant to other health agencies, such as the New Mexico Health Education Coalition, particularly regarding death and grief counseling, and assisting in preparation of a school health program.

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DEATH INVESTIGATION:

An Analysis of Laws and Policies of the United States, Each State and Jurisdiction

(as of January 31,1977)

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Health Services Administration

DEATH INVESTIGATION:

AN ANALYSIS OF LAWS AND POLICIES OF THE UNITED STATES, EACH STATE AND JURISDICTION

[As of January 31, 1977]

The research herein was performed by the Sheehan, Phinney, Bass & Green Prof. Ass'n., Manchester, New Hampshire pursuant to contract 240-76-0021 with the Bureau of Community Health Services, Health Services Administration, Department of Health, Education, and Welfare. The opinions expressed herein are those of the authors and should not be construed as representing the opinions or policies of any agency of the United States Government.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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National Surveillance Project

Of Death Investigation Systems

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This study has been prepared pursuant to Contract No. HSA 240-76-0021 between Sheehan, Phinney, Bass & Green Prof. Ass'n and the Bureau of Community Health Services (BCHS), Health Services Administration, U.S. Department of Health, Education and Welfare (DHEW).

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The study is designed to assemble and analyze existing State and Territorial law, policies and regulations governing medico-legal death investigation. Its purpose is to assist the BCHS Office of Maternal and Child Health in developing a systematic surveillance of national medico-legal investigation of death in relationship to the sudden and unexplained death of infants.

In addition to the 50 States, this study covers the District of Columbia, American Samoa, Guam, Puerto Rico, Panama Canal Zone, and the U.S. Virgin Islands. Local ordinances or regulations and policies adopted by governmental bodies below the State level are not included except in occasional instances where cited to clarify State law. The study speaks as of January 31, 1977, although in a few instances later developments are included.

TABLE OF CONTENTS

Page

INTRODUCTION . . . . (i)

SECTION I. Narrative Description of Operations of Death Investigation Systems for Each State and Territory 1

Alabama 2

Alaska 3

Arizona 3

Arkansas 4

California 5

Colorado 7

Connecticut 8

Delaware 10

Florida 11

Georgia 12

Hawaii 13

Idaho 13

Illinois 14

Indiana 15

Iowa 16

Kansas 17

Kentucky 18

Louisiana 19

Maine 20

Maryland 21

Massachusetts 22

Michigan 23

Minnesota 24

Mississippi 27

Missouri 29

Montana 31

Nebraska 32

Nevada 32

New Hampshire 33

New Jersey 34

New Mexico 35

Page

New York 36
North Carolina 38
North Dakota 39
Ohio 41
Oklahoma 42
Oregon 43
Pennsylvania 45
Rhode Island 45
South Carolina 46
South Dakota 48
Tennessee 49
Texas 50
Utah 52
Vermont 53
Virginia 54
Washington 55
West Virginia 56
Wisconsin 58
Wyoming 59
American Samoa 59
Canal Zone 60
District of Columbia 60
Guam 61
Puerto Rico 62
Virgin Islands 63
SECTION II. Abstracts of Statutory Law for Each State and Territory 65
Alabama 66
Alaska 66
Arizona 67
Arkansas 68
California 69
Colorado 70
Connecticut 70

Page

Delaware 71
Florida 72
Georgia 72
Hawaii 73
Idaho 74
Illinois 74
Indiana 75
Iowa 75
Kansas 76
Kentucky 76
Louisiana 77
Maine 78
Maryland 79
Massachusetts 80
Michigan 81
Minnesota 82
Mississippi 84
Missouri 85
Montana 88
Nebraska 88
Nevada 89
New Hampshire 89
New Jersey 90
New Mexico 91
New York 92
North Carolina 93
North Dakota 94
Ohio 95
Oklahoma 95
Oregon 96
Pennsylvania 97
Rhode Island 98
South Carolina 99
South Dakota 100

Page

Tennessee 100

Texas 101

Utah 103

Vermont 103

Virginia 104

Washington 105

West Virginia 106

Wisconsin 107

Wyoming 107

American Samoa 108

Canal Zone 108

District of Columbia 109

Guam 109

Puerto Rico 110

Virgin Islands 111

APPENDIX: Supplemental Data 113

TABLE 1. Family Categories Identified by Functional Characteristic Only 114

TABLE 2. Families Of Medico-Legal Systems by Functional Characteristic and Jurisdiction 114

TABLE 3. Numerical Summary of Categories 117

TABLE 4A. Jurisdictions Presently Maintaining Statutory Provisions Referencing Infant Death 117

TABLE 4B. Jurisdictions Having Received Legislative Bills, Not Becoming Law, Which Referenced Infant Death 117

TABLE 5. State and Territorial Abbreviations 118

TABLE 6A. Distribution by Structure 119

TABLE 6B. Nature of Structure Per Jurisdiction 119

TABLE 7. Distribution by Qualifications 120

TABLE 8. Distribution by Method of Accession 120

TABLE 9. Distribution by Authority to Order 120

TABLE 10. Summary of Categories 121

Introduction

On April 22, 1974, the SIDS Act of 1974 (P.L. 93-270) was signed into law and codified as an amendment to the Public Health Services Act (42 U.S.C. 300c-11). In pertinent part, the Act authorizes start-up federal funding of:

> programs providing information and counselling services to families and other persons affected by infant death;
>
> programs designed to develop public information and professional educational materials relating to infant death, and to disseminate such information and materials to persons providing health care, to public safety officials, and to the general public.

Although the Act, by its terms and funding, seeks to foster programs which would alleviate the family dislocation and remorse resulting from infant death, Federal law itself cannot be expected to fully resolve all issues attendant to this special public health problem. The fact of the case is that the ultimate providers of professional counselling services to those affected by infant death must be found at the State level. It is State law which expressly requires medico-legal investigative agencies to take initial and exclusive investigation over any sudden, unexplained or unattended death. It is State law which legally mandates investigative procedures that operate to either support or erode family unity in facing an infant death.

Whether or not a given State agency may effectively participate in a family counselling program at all remains a function of those State laws prescribing local death investigative procedure--since nothing in the Act compels State, county or municipal authority to modify administrative norms to accommodate a trained and sensitive handling of infant deaths.

Recognizing the dispositive effect certain State and Territorial law exercises on programs relating to public health deaths, this study offers a concise and uniform overview of the legal framework underpinning a national medico-legal system of death investigation.

Any endeavor to create the proper context within which this study might be utilized should include a statement characterizing the present status of death investigation and its evolving national purpose. Historically, the medico-legal system adopted an accusatory approach to the investigation of sudden and unattended death: The purpose of a death investigation was merely to collect evidence, first, to determine whether the subject death resulted from a criminal act, and, if so, to aid in the conviction of the alleged perpetrator. Today, there is an increasing awareness of the importance of medico-legal death investigation for programs of disease and accident prevention, medical research, and other public health programs.

The growth of highly sophisticated medical technology and the introduction of public health issues as a matter of social priority have resulted in a wholesale reevaluation of the traditional function of death investigation. This progress has fostered a redefinition and extension of the medico-legal role beyond the criminal justice system to meet the greater public health expectations of the general populace.

Recent activities of leading medico-legal professional associations [such as the National Association of Medical Examiners, the International Association of Coroners and Medical Examiners, and the American Academy of Forensic Science among others] indicate a commitment of those organizations setting professional medico-legal standards to design policies and protocols geared to existing public health demands. Among the most encouraging aspects of this trend include the regionalization and modernization of medico-legal facilities and services, the widespread dissemination of new techniques and technologies through programs of continuing professional education, and a movement away from the confines of strictly forensic investigation toward a more comprehensive public health approach.

Perhaps the foremost example of an increasing involvement of the medico-legal community with extra-forensic public health death is that of the sudden and unexpected infant death. It is from the standpoint of the public health death, and, in particular, infant death, that this study views the national medico-legal system of death investigation.

Although the purpose of this report is to objectively characterize those individual medico-legal systems at the State and Territorial level relevant to the investigation of infant death, it is perhaps helpful for a general understanding of the subject to typify death investigation procedure as it exists in the United States today. The following is a descriptive summarization of, not necessarily an ideal standard for, those standard procedures commonly adopted by most systems in the conduct of post-mortem investigations:

> When a death is discovered to have occurred unattended by a physician, it must be reported to a law enforcement officer, who in turn notifies the medico-legal system exercising jurisdiction in the locale where the body is found.
>
> An agent of that office is immediately delegated the responsibility for conducting an on-site preliminary investigation to determine whether the manner of death is actually subject to the jurisdiction of the system. [The definition of a "subject death" is set forth in each jurisdiction by statute, varying in detail from a multitude of particularized situations to merely any suspicious, unnatural or unattended demise.] This preliminary investigation includes: verification of the reported death; collection of personal and medical data on the deceased; review of all observeable circumstances surrounding death, such as place, time, witnesses, and causal agents; and, of course, a view, which consists of a visual examination of the body. It is standard procedure that in any subject death the body may not be moved without the permission of the responsible investigating medico-legal officer.
>
> After completion of the view, the case officer is obligated to make a recommendation to his superiors within the medico-legal system. This recommendation takes the form of either a call for additional investigation or for certification of death. The latter results in official identification of the cause of death and, normally, closes the file on the case as a matter warranting no further investigation by the medico-legal office.
>
> However, if a recommendation for additional investigation is acted upon, the case officer initiates such investigation on two levels: First, the responsible law enforcement agency is notified, which then conducts an independent circumstantial inquiry into the death. Second, either an inquest or a forensic investigation is ordered, which may entail further external examination, chemical and toxicological testing.
>
> Should the investigation yield no persuasive grounds for certifying the cause of death, further recommendation for gross or partial autopsy will be made and decided upon within the medico-legal system. All avenues of forensic investigation would be utilized by the medico-legal system for the ultimate purpose of determining cause of death. Only certification of death properly concludes a post-mortem investigation.
>
> Throughout the investigation records are maintained regarding its conduct and conclusions, including the results of all tests, examinations, and circumstantial investigation. Upon certification, the complete report is issued by the case officer to certain designated authorities within the criminal justice system and, in an increasing number of jurisdictions, to certain State agencies involved with Public Health.

Within this broadly described medico-legal procedure a great deal of discretion, judgment and experience is exercised by each system in carrying out the jurisdiction's statutory mandate to investigate death. This same discretion is implicit in the preparation of investigative reports and the certification of death. It is the element of investigatory discretion, as channelled by the overall character of the system, which lends itself to an adjustment of the medico-legal function to accommodate contemporary considerations in the medico-legal investigation of infant death.

Leaving aside the substance of the report, the development of the present study can be characterized as in two main parts - research and production.

The initial, or research, aspect of the project's methodology can be further divided into five steps: (1) Collection of all pertinent statutory material relative to death investigation and registration in each of the fifty-six jurisdictions examined; (2) Verification of such material for accuracy and currency by independent staff research and review; (3) Identification of collected material by reference to topical sub-categories; (4) Summarization and digesting of all relevant statutory material; and (5) Development of a list of official field contacts in each jurisdiction for competent and authoritative outside review of statutory research and analysis.

The second, or production, phase of methodology involved: (1) Staff evaluation of each jurisdiction's death investigation system by reference to standard functional and statutory characteristics; (2) Preparation of narrative and abstract summarizations for each system; (3) Categorization of systems into families on the basis of common operational traits; (4) Organization of support data in statistical form; and (5) Preparation of the final written report.

It should be noted at the outset that the primary purpose of this study is to present a view of the individual character of those systems mandated with responsibility for death investigation at the State and Territorial level. Toward this end, certain functional traits were identified as defining a given system. The absence (or presence) of certain of these functional traits in a particular jurisdiction, however, does not of itself provide a basis for critical evaluation of the system in terms of its effectiveness or efficiency in death investigation. The report does not conform to such use.

As it is largely through operations procedure that each death investigation system performs its official mandate, those functional traits identified as common to most systems were selected as criteria for the analyses delineated in Section II of the report. These comparative characteristics include: system structure; method of staff selection and accession; staff qualifications; and authority to order autopsies.

Examination of the statutory foundation for the medico-legal function within these jurisdictions was conducted to determine variables among systems in terms of each of the above major characteristics. Shared traits among systems resulted in the family groupings found appended to the study.

The major principle of the project's surveillance of medico-legal death investigation systems is that the report is premised almost entirely upon legal analysis of each jurisdiction's respective statutes, regulations, and, where applicable, constitutional and decision law. The existence of clear discrepancies between law and practice in the operation of a number of the systems must be a keen and early realization in evaluating the report. With the exception of those items brought to the fore by verification through field representatives, functional deviations from legal mandate have not been generally incorporated in the study. And where they are referenced, it is by footnote and not by amendment or alteration of what otherwise is the required reading of the statute. In the interest of maintaining an objective and constant approach to the study, a strict interpretation of the letter of the law of each jurisdiction relative to death investigation constitutes the mainstay of the report.

A second principle of the project's survey is that the data and analyses presented are not intended to constitute an exhaustive census of each medico-legal death investigation system at every administrative level. For example, several "State" systems prove in fact to be multi-tier systems subordinate to municipalities, counties, classes of counties or specific State agencies. These sub-structures are not individually analyzed by the report.

Another basic premise carried throughout the research phase of the project was that all studied legal authority was considered perishable as subject to material amendment at any time. Consequently, one of the most time-consuming and persistent aspects of the study was the continual review and up-dating of statutory material. As the project neared completion, January 31, 1977 was chosen as the effective date beyond which no new material could be successfully incorporated into the report, and as such represents the terminus of primary material studied.

SECTION I:

NARRATIVE DESCRIPTION OF OPERATIONS OF DEATH INVESTIGATION SYSTEMS FOR EACH STATE AND TERRITORY

The following is a compendium of the operations of death investigation systems found among the fifty-six studied jurisdictions. The material sets forth in summary fashion the statutory bases for each system written in a manner calculated to be understood by the reader without medico-legal background or training. A more technical approach to the material can be found in SECTION II of this study.

ALABAMA

Alabama's death investigation system consists of county coroners and county health officers. All deaths which occur without medical attendance in a county are required to be investigated by the county coroner or the county health officer.

Each county coroner is elected for a term of four years. When the coroner is informed that a person is dead in the county and that he died without being attended or examined by a legally qualified physician, the coroner is required to immediately proceed to the place where the dead body is lying, examine the dead body to ascertain the cause of death, and make a report. If the coroner is unable to determine the cause of death, he may summon any physician or surgeon to make an external post mortem examination of the dead body and report his opinion of the cause of death to the coroner is writing. If the surgeon or physician is unable to determine the cause of death from an external post mortem examination, and the coroner has reasonable cause to believe that the deceased came to his or her death by unlawful means, the coroner may in such cases order any physician or surgeon to perform an autopsy or internal examination on the dead body and report the findings of the autopsy to the coroner in writing.

A county health officer is required to be elected by the county board of health in each county, subject to the approval of the State committee of public health, for a term of not less than three years. When the county health officer investigates any death which occurs without medical attendance and he suspects suicide or is unable to ascertain the cause of death, or finds circumstances which causes suspicion that the death was caused by the criminal act of another, he is required to refer the case to the coroner or other proper officer for his investigation and certification.

When a coroner is informed that a person has been killed, or suddenly dies under such circumstances as to afford a reasonable ground for belief that such death was occasioned by the act of another by unlawful means, he is required to inquire into the facts and circumstances of the death by taking the sworn statement in writing of the witnesses having personal knowledge of the death and to submit such statements to a judge of a court of record or a solicitor. If, upon the preliminary inquiry, the judge or solicitor is satisfied from the evidence submitted that there is a reasonable ground for believing that the death was occasioned by the act of another by unlawful means, he is required to direct the coroner to summon a jury of inquest to inquire into the cause of death. After inspecting the body and hearing the evidence, the jury is required to render their verdict and certify it by an inquisition in writing signed by them. Each inquisition so taken is required to be returned by the coroner immediately, together with the written statement under oath taken by him on the preliminary investigation, to the clerk of the circuit court of the county.

All county health officers and county coroners are required to correctly make and accurately keep all books, or sets of books, documents, files, papers, letters and copies of letters, as at all times to afford full and detailed information in reference to their duties, and from which the actual status and condition of such duties can be ascertained without extraneous information. County health officers and county coroners are required, in each death investigated, to make and file a certificate of death stating the name of the deceased, if known, the cause of death, or if an external cause, the means of death and whether accidental, suicidal, or homicidal.

Every citizen has a right to inspect and take a copy of any public writing kept by a county health officer or county coroner.

Each record of death is required to be made available by the State Registrar of vital statistics when such recorded information is required for the determination of personal and property rights of the individual, for establishing the age, birth place, parentage, identification, cause of death and similar needs and legitimate uses of such records and then only for such proper purposes. The State Registrar and his authorized representatives are required to furnish any record of death in their custody, or any information relative to such record, unless they are satisfied that the applicant has a valid and tangible interest in the matter recorded.

Alabama has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Ala. Code Tit. 12, § 54, Tit. 12, § 57; Tit. 22, § 8; Tit. 15, § 76, Tit. 15, § 78, Tit. 15, § 82, Tit. 15, § 83; Tit. 22, § 26; Tit. 41, § 165; Tit. 22, § 42; Tit. 41, § 139.

ALASKA

Alaska's death investigation system consists of coroners and medical examiners. District judges and magistrates are required to serve as ex officio coroners and perform the duties and exercise the authority of that office. When authorized by the supreme court, the judge in each judicial district is required to appoint a person to act as public administrator of the estates of deceased persons and as coroner.

The commissioner of health and social services is authorized to appoint for a term of one year or less as many medical examiners in each of the judicial districts as, in his opinion, the administration of justice requires. Each medical examiner is required to be a physician licensed to practice in Alaska or a physician employed by the State, or an agency of the United States Government within the State if licensed in a State other than Alaska.

When a person dies unattended by a physician or when no physician is prepared to execute a certificate of death, the district judge or magistrate assigned to serve the place where the death occurs may by written order direct a medical examiner to view the dead body and to perform an examination, including an autopsy, as is, in the opinion of the medical examiner, necessary to make a proper determination of the cause of death and to execute the prescribed death certificate. Upon completing his examination, the medical examiner is required without delay to submit a report of his findings and conclusions to the district judge or magistrate. The judge or magistrate is required to order an inquest if the findings and conclusions of the medical examiner, together with the other information available to the judge or magistrate, so warrant. In holding an inquest, the district judge or magistrate may subpoena and examine an appointed medical examiner when available, or otherwise a physician, who is required to examine the body and give a professional opinion as to the cause of death. If the findings and conclusions of the medical examiner together with other information available to the judge or magistrate do not warrant an inquest, the district judge or magistrate is required to enter an order dispensing with the inquest and to record the certificate of death as prescribed by law.

When a coroner is informed that a person has been killed by another or has suddenly died under such circumstances as to afford a reasonable ground to suspect that his death has been occasioned by criminal means or he has committed suicide, the coroner is required to go to the place where the dead person is, or, in the alternative, arrange for a peace officer to do so and report his findings to the coroner, on the basis of which the coroner may proceed with an inquest if an inquest is warranted.

The inspection, disclosure, and copying of vital statistics records may occur only when the custodian is satisfied that the applicant has a direct interest in the matter and that the information is necessary for the determination of personal and property rights.

Reports of findings and conclusions are submitted to the district judge or magistrate having jurisdiction. No further statutory indication exists relative to the accessibility of such reports to next of kin.

Alaska has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Alaska Stat. §§ 12.65.010, 12.65.020, 12.65.030, 12.65.040, 12.65.070; §§ 22.15.110, 22.15.310, 22.15.350; §§ 18.50.310, 18.50.320; §§ 09.25.110, 09.25.120; Alaska Admin. Code § 05.925.

ARIZONA

Arizona has a county medical examiner death investigation system, with the power of appointment in the board of supervisors of each county. Each county medical examiner is required to be a licensed physician in good standing certified in pathology and skilled in forensic pathology. If the board of supervisors of any county determines that the appointment of a medical examiner is not practical, the board of supervisors is required to establish a list of licensed physicians who have agreed to perform the duties required of a county medical examiner on a contract basis. Licensed physicians on such list are not required to be either residents of the county, certified in pathology or skilled in forensic pathology. The county medical examiners are responsabile for the medical examination or autopsy of a human body when death occurs and the deceased is not under the current care of a physician for a potentially fatal illness or when an attending physician is unavailable to sign the death certificate; or when death results from violence; or when death occurs suddenly when in apparent good health, or in prison, or in a suspicious, unusual, or unnatural manner, or during anesthetic or surgical procedures; or when death from disease or accident is believed to be related to the deceased's occupation or employment; or when death is believed to present a public health hazard; or when death occurs and the deceased is a prisoner.

Whenever any person knows of the death of a human being under any of the above described circumstances, he is required to notify the nearest peace officer who is required to notify the county medical examiner.

Each county medical examiner is permitted to authorize qualified practicing physicians in local areas to perform medical examinations required of the county medical examiner. If no county medical examiner has been appointed, the peace officer is required to notify the county sheriff who in turn is required to notify and secure a licensed physician to perform the medical examination or autopsy.

The county medical examiner or person performing the duties of a county medical examiner is required to take charge of the dead body of which he is notified. After making inquiries regarding the death and the circumstances surrounding it, the county medical examiner or person performing the duties of a county medical examiner is required to conduct such investigation as may be required and to determine whether or not the public interest requires an autopsy or other special investigation. In determining whether an autopsy is needed, the county medical examiner or person performing the duties of a county medical examiner may consider the request for an autopsy made by private persons or public officials, except that he is required to perform an autopsy if he is requested to do so by the county attorney or a superior court judge of the county where the death occurred.

The county medical examiner or the person performing the duties of a county medical examiner is required to reduce his findings to writing and to promptly make a full report. If an autopsy is performed, a full record or report of the facts developed by the autopsy in the findings of the person making the autopsy is required to be made and filed in the office of the county medical examiner or board of supervisors. The county attorney may request and receive from the county medical examiner or person performing the duties of a county medical examiner a copy of the report on any autopsy performed. In those cases in which a medical examination or an autopsy is performed, the county medical examiner or person performing the duties of a county medical examiner is required to execute a death certificate indicating the cause and manner of death. If death is found to be from other than natural causes, or if further investigation appears to be necessary, the county medical examiner or person performing the duties of a county medical examiner is required to notify the county attorney of the appropriate city, town, county or State law enforcement agency.

All death investigation records are public records and at all times during office hours are required to be open to inspection by any person. Any person may request to examine or be furnished copies, printouts, or photographs of any public record during regular office hours.

A certified copy of a death certificate may be obtained by any applicant with a legal or other vital interest in the record or upon order of a court of competent jurisdiction.

Arizona has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Ariz. Rev. Stat. Ann. §§ 11-591, 11-592, 11-593, 11-594, 11-597; 36-340; 39-121, 39-121.01; Reg. of Bureau of Vital Statistics R9-19-401, et seq.

ARKANSAS

Arkansas has a state medical examiner and county coroner death investigation system.

The State Medical Examiner Commission which is composed of the Dean of the University of Arkansas School of Medicine, the Director of the State Board of Health, the Director of the Arkansas State Police, a member to be named by the Arkansas Sheriff's Association, and a member to be named by the Association of the Chiefs of Police of Arkansas, is required to appoint and employ a State Medical Examiner and may remove him only for cause. The State Medical Examiner is required to be a citizen of the United States and a physician or surgeon with an M.D. degree who has been licensed or is eligible for licensure to practice medicine in the State of Arkansas and who has had a minimum of three years post graduate training in human pathology as recognized by the American Medical Association plus at least one year of experience in medico-legal practice. The State Medical Examiner may delegate specific duties to competent and qualified assistants and deputies who may act for the State Medical Examiner within the scope of the express authority granted by him subject to any rules and regulations prescribed by the State Medical Examiner Commission.

A county coroner is elected by the qualified electors of each county for a term of two years and is commissioned by the Governor. Each coroner may at his discretion appoint deputy coroners.

The State Medical Examiner is authorized to investigate the death of any person from violence, whether apparently homicidal, suicidal, accidental, or industrial, including but not limited to death due to thermal, chemical, electrical or radiation injury and death due to criminal abortion, whether apparently self-induced or not, or suddenly when in apparent good health, or in a prison, jail or penal farm, or in any suspicious or unusual or unnatural manner. When the State Medical Examiner is informed that a death has occurred in any such manner or under any such circumstances, he is authorized to make such examinations, investigations and autopsies as he deems necessary or as may be requested by the Prosecuting Attorney, the Circuit Court, the Sheriff of the County in which death occurs, the Chief of Police of a City in which death occurs, or the Commission of the Arkansas Department of Correction at the time of death. The State Medical Examiner is not required to make such examination, investigation, or autopsy at the request of any private citizen or any public official other than those enumerated above.

Each county coroner is required to investigate the cause of death when death occurs without medical attendance or when the dead body of any person is found and the circumstances of his death are unknown or indicate that he has been foully dealt with. Upon receiving any information that such a death has occurred, the coroner is required to hold an inquest to inquire into the cause, manner and circumstances of the death. The coroner is required to deliver every inquisition, with all the examinations, depositions, and recognizances concerning the case to the clerk of the Circuit Court of his county, who is required to immediately lay the same before the Prosecuting Attorney, prosecuting in and for the county.

The State Medical Examiner or his assistants are required to promptly make and file with the Prosecuting Attorney of the county in which the death occurs a full report of his findings and the facts developed by an autopsy. The State Medical Examiner or his assistants or deputy, is required to make a certificate of death.

All records, files and information kept, retained or obtained by the State Medical Examiner in his examinations, investigations and autopsies are confidential and privileged unless released by a court of competent jurisdiction, the Prosecuting Attorney having criminal jurisdiction over the case, or by the State Medical Examiner, to persons with legal or scientific interests.

The State Registrar is required to permit the inspection of a death record, or issue certified copies from a death record or part of a death record, only when he is satisfied that the applicant has a direct and tangible interest in the content of the death record and that the information contained in the death record is necessary for the determination or protection of a personal or property right.

Arkansas has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Const., Art. VII, §§ 46, 48; Ark. Stat. Ann. §§ 12-201, 12-901; §§ 42-611, 42-612, 42-613, 42-615, 42-616, 42-621, 42-622, 42-301, 42-302, 42-325; § 82-520.

CALIFORNIA

California's death investigation system consists of county coroners and medical examiners.

A coroner is required to be elected by the people of each county. The board of supervisors in any county may, by ordinance, abolish the office of coroner and provide instead for the office of medical examiner, to be appointed by the board and to exercise the powers and perform the duties of the coroner. Each medical examiner is required to be a licensed physician and surgeon duly qualified as a specialist in pathology.

Coroners and medical examiners are required to inquire into and determine the circumstances, manner, and cause of all violent, sudden or unusual deaths; unattended deaths; deaths in which the deceased has not been attended by a physician in the twenty days before death; deaths related to or following known or suspected self-induced or criminal abortion; known or suspected homicide, suicide, or accidental poisoning; deaths known or suspected as resulting in whole or in part from or related to accident or injury either old or recent; deaths due to drowning, fire, hanging, gunshot, stabbing, cutting, exposure, starvation, acute alcoholism, drug addiction, strangulation, aspiration or where the suspected cause of death is sudden infant death syndrome; death in whole or in part occasioned by criminal means; deaths associated with a known or alleged rape or crime against nature; deaths in prison or while under sentence; deaths known or suspected as due to contagious disease and constituting a public hazard; deaths from occupational disease or occupational hazards; deaths under such circumstances as to afford a reasonable ground to suspect that the death was caused by the criminal act of another, or any deaths reported by physicians or other persons having knowledge of death for inquiry by coroner.

Upon being informed that a death has occurred under any of the above described circumstances and finding that it falls into the classification of deaths requiring inquiry, the coroner or medical examiner, or his appointed deputy, may immediately proceed to where the body lies, examine the body, make identification, make inquiry into the circumstances, manner, and means of death, and, as circumstances warrant, order its removal for further investigation or disposition. The coroner or medical examiner has discretion to determine the extent of inquiry to be made into any death occurring under any of the above described circumstances. If in his inquiry he determines that the physician of record has sufficient knowledge to reasonably state the cause of death occurring under natural circumstances, the coroner or medical examiner may authorize that physician to sign the certificate of death.

At the scene of any death, when it is immediately apparent or when it has not been previously recognized and the coroner's examination reveals that police investigation or criminal prosecution may ensue, the coroner or medical examiner may not further willfully disturb the body or any related evidence until the law enforcement agency has had reasonable opportunity to respond to the scene, if their purposes so require and they so request. In all cases in which a person has suddenly died under such circumstances as to afford a reasonable ground to suspect that his death has been occasioned by the act of another by criminal means, the coroner or medical examiner is required to immediately upon receiving notification of the death to report it both by telephone and written report to the chief of police, or other head of the police department of the city or city and county in which the death occurred outside the incorporated limits of a city. When the suspected cause of death is sudden infant death syndrome, the coroner or medical examiner is required to, within 24 hours or as soon as is feasible, unless the infant's physician of record certifies sudden infant death syndrome as the cause of death and a parent objects to an autopsy, and, in all other cases, the coroner or medical examiner, may, in his discretion, take possession of the body, and make or cause to be made a post mortem examination or autopsy on the body.

In any case involving an infant under the age of one year where the gross autopsy results in a provisional diagnosis of sudden infant death syndrome, the coroner or medical examiner is required, within 24 hours of the gross autopsy, to notify the county health officer. The detailed findings resulting from an inspection of the body or autopsy by an examining physician is required to be either reduced to writing or permanently preserved on recording discs or other similar recording media, including all positive and negative findings pertinent to establishing the cause of death in accordance with medico-legal practice. These findings, along with the written opinions and conclusions of the examining physician, are required to be included in the coroner's record of the death.

In those cases in which a coroner or medical examiner is required to conduct an inquiry pursuant to law, he is required to personally sign the certificate of death. The cause of death appearing on such certificate must be in conformity with facts ascertained from inquiry, autopsy and other scientific findings. In case of death without medical attendance and without violence, casualty, criminal or undue means, the coroner or medical examiner may, without holding an inquest or autopsy, make the certificate of death from statements of relatives, persons last in attendance, or persons present at the time of death, after due medical consultation and opinion has been given by one qualified and licensed to practice medicine and so recorded in the records of death, providing such information affords clear grounds to establish the correct medical cause of death within accepted medical practice by the Division of Vital Statistics of the State Department of Public Health.

Each coroner or medical examiner may, in his discretion, if the circumstances warrant, hold an inquest. If requested to do so by the Attorney General, the district attorney, sheriff, city prosecutor, city attorney, or a chief of police of a city in the county in which such coroner or medical examiner has jurisdiction, the coroner or medical examiner is required to hold an inquest. Each inquest is required to be open to the public and may be held with or without a jury at the coroner's or medical examiner's discretion.

The coroner or medical examiner may summon a surgeon or physician to inspect the body or hold a post mortem examination and give a professional opinion as to the cause of the death. After hearing the testimony, the jury is required to render its verdict and certify it by an inquisition in writing signed by the members of the jury, or the coroner or medical examiner is required to render his decision if the inquest is held without a jury, setting forth the name of the deceased, the time and place of death, the medical cause of death and whether the death was by natural causes, suicide, accident, or the hands of another person other than by accident. In addition to filing his findings with the county clerk, if the findings are that the deceased met his death at the hands of another, the coroner or medical examiner is required to transmit his written findings to the district attorney, the appropriate police agency, and any other police agency requesting copies.

Each coroner or medical examiner is required to keep an official register or file which includes: the name and any aliases of the deceased, when known; a narrative summary of the circumstances leading to and surrounding the death, together with names and addresses of any witnesses to such events; the cause of death, when known, with reference or direction to the detailed medical reports upon which decision as to cause of death has been based; and persons notified of the death, together with a notation of any unsuccessful attempts at notification.

Records of coroners and medical examiners are public records and are required to be open to inspection by any citizen at all times during office hours. Death certificates are required to be open for inspection by the public in accordance with rules and regulations adopted by the State department of health for local registrars.

Coroners and medical examiners are required to inquire into and determine the circumstances, manner, and cause of those deaths where the suspected cause of death is sudden infant death syndrome. The coroner or medical examiner, within 24 hours or as soon as is feasible, when the suspected cause of death is sudden infant death syndrome unless the infant's physician of record certifies sudden infant death syndrome as the cause of death and a parent objects to an autopsy, is required to take possession of the body, and to make or cause to be made a post mortem examination or autopsy of the body.

The detailed medical findings resulting from an inspection of the body or autopsy by an examining physician is required to be either reduced to writing or permanently preserved on recording discs or other similar recording media, including all positive and negative findings pertinent to establishing the cause of death in accordance with medico legal practice, and along with written opinions and conclusions of the examining physician, are required to be included in the coroner's record of death.

In those cases involving an infant under the age of one year where the gross autopsy results in a provisional diagnosis of sudden infant death syndrome, the coroner or medical examiner is required, within 24 hours of the gross autopsy, to notify the county health officer. Upon receiving such notification, the county health officer or his designated agent, after consultation with the infant's physician of record, is required to immediately contact the person or persons who had custody and control of the infant and explain to such persons the nature and causes of the syndrome to the extent that current knowledge permits.

The State Department of Health is required to keep each county health officer advised of the most current knowledge relating to the nature and causes of sudden infant death syndrome. Annually, on or before April 1 of each year, the State Department of Health is required to submit a report to the legislature specifying the number of autopsies and post mortem examinations performed pursuant to law during the prior year, where the suspected cause of death was sudden infant death syndrome.

Citations: Cal. Gov't Code §§ 6250, 6253, 7113; §§ 24300, 24304, 24306; §§ 24009, 24010; § 24001 (1975 Supp.); Art. 4, § 462; Cal. Admin. Code Tit. 17, §§ 901, 902; Ch. 10, Art. I, §§ 27460 to 27471; Cal. Health & Safety Code § 10250 § 10253; Cal. Vital Statistics Code, § 10066; Cal. Public Health Admin. Code, Art. 1, § 218.

COLORADO

Colorado has a county coroner death investigation system. A coroner is elected in each county for a term of four years. No person may hold the office of coroner unless he is a qualified elector and has resided in the county one year preceding his election. Each coroner may appoint one or more deputies to assist him in the exercise of his powers and duties. Coroners are required to investigate those deaths which occur from external violence, unexplained cause, or under suspicious circumstances, or where no physician is in attendance, or where, though in attendance, the physician is unable to certify the cause of death.

Whenever a coroner is notified that a person has died in his jurisdiction under any of the above described circumstances, he is required to immediately notify the district attorney, proceed to view the body, and make a proper inquiry respecting the cause and manner of death. If the coroner or the district attorney deems it advisable, a post mortem examination of the body of the deceased is required to be made by a licensed physician to determine the cause of death. The coroner may also summon six citizens of the county to hold an inquest to hear testimony and to make such inquiries as he deems appropriate. In all cases where the coroner has held an investigation or inquest, he or his deputy is required to issue a certificate of death and file such certificate with the local registrar of the local registration district in which the death occurred. Any certificate of death issued by a coroner, or his deputy, is required to state his findings concerning the nature of the disease or the manner of the death, and, if from external causes, whether in his opinion the death was accidental, suicidal, or felonious.

The records of all coroners are open for inspection by any person at reasonable times. Copies, print-outs, or photographs of any record are required to be furnished upon request and payment of a reasonable fee.

Death certificates are treated as confidential, but the department of health is required, upon request, to furnish to any applicant having a direct and tangible interest in a vital statistics record a certified copy of the death certificate.

Colorado has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Colo. Rev. Stat. Ann. §§ 30-10-601, 30-10-602, 30-10-606, 30-10-609; 24-72-201, 24-72-204, 24-72-205; 25-2-117; Const., Art. XIV, §§ 8, 10.

CONNECTICUT

Connecticut's death investigation system consists of state medical examiners and county coroners.

The commission on medico-legal investigations, an independent nine member administrative commission, consisting of two full professors of pathology, two full professors of law, a member of the Connecticut Medical Society, a member of the Connecticut Bar Association, two members of the public selected by the Governor, and the State commissioner of health, is charged with the responsibility of supervising the office of the medical examiner and of appointing a chief medical examiner to direct the office. The chief medical examiner is required to be a citizen of the United States and a doctor of medicine licensed to practice medicine in Connecticut and is required to have had a minimum of four years postgraduate training in pathology and such additional subsequent experience in pathology as the commission on medico-legal investigations determines. The chief medical examiner's term of office and his annual salary are fixed by the commission on medico-legal investigations and he may be removed by the commission only for cause. The chief medical examiner, with the approval of the commission, is required to appoint a deputy medical examiner to perform the duties of the chief medical examiner in case of his sickness or absence, and such assistant medical examiners, pathologists, toxicologists, laboratory technicians, and other professional staff as the commission specifies.

For each county, the judges of the Superior Court are required to appoint, upon the recommendation of the State's attorney for such county, an attorney at law residing in the county to serve as coroner for a term of three years. Each coroner is required, for such time as he may designate, to appoint a deputy coroner to act for the coroner in case of the absence from his county or inability of the coroner.

The chief medical examiner is required to investigate all of the following deaths: violent deaths, whether apparently homicidal, suicidal, or accidental, including but not limited to deaths due to thermal, chemical, electrical, or radiational injury and deaths due to criminal abortion, whether apparently self-induced or not; sudden or unexpected deaths not caused by readily recognizable disease; deaths under suspicious circumstances; deaths of persons whose bodies are to be cremated, buried at sea, or otherwise disposed of so as to be thereafter unavailable for examination; deaths related to disease resulting from employment or to accident while employed; and deaths related to disease which might constitute a threat to public health.

Upon receiving notification of the occurrence of any such death, the chief medical examiner or an authorized assistant medical examiner is required to take charge of the body and conduct an investigation. If the investigation of the circumstances and examination of the body enables the chief medical examiner to conclude with reasonable certainty that death occurred from natural causes or obvious traumatic injury, and there are no other circumstances which would appear to require an autopsy, the medical examiner in charge is required to certify the cause of death and file a report of his findings in the office of the medical examiner. If in the opinion of the medical examiner in charge an autopsy is necessary, an autopsy is required to be performed by the chief medical examiner, the deputy medical examiner, or a designated pathologist. If the medical examiner in charge has reason to suspect that a homicide has been committed, an autopsy is required to be performed by the chief medical examiner, deputy medical examiner, or a designated pathologist in the presence of at least one other designated pathologist, if such other pathologist is available.

A detailed description of the findings of all autopsies and the findings of the investigation at the scene of death and any conclusions drawn from such findings are required to be filed in the office of the medical examiner. Any State's attorney or assistant State's attorney, coroner, deputy coroner, the chief medical examiner, or an authorized assistant medical examiner has the right to require an autopsy in any case in which there is a suspicion that death resulted from a criminal act.

Upon completion of each investigation, the chief medical examiner or an authorized assistant medical examiner is required to file a death certificate with the registrar of vital statistics for the town in which the death occurred. When the chief medical examiner, deputy medical examiner, or an authorized assistant medical examiner has reason to suspect that the person whose body he has viewed came to his death by the criminal act, omission or carelessness of another or others, he is required to notify the coroner for the county in which such act, omission or carelessness took place of such death and of the place where the body is lying. When the coroner receives such notice, he is required at once to make all proper inquiry into the cause and manner of death. The office of the medical examiner is required to keep full and complete records, properly indexed, giving the name, if known, of every person whose death is investigated, the place where the body was found, the date, cause and manner of death, and a copy of the death certificate. The office is required to promptly notify of such death and deliver to the State's attorney and the coroner having jurisdiction over the case copies of all pertinent records relating to every death as to which further investigation may be advisable.

Each coroner is required to preserve in a temporary binder in chronological order all findings made by him and also a record of all sudden and suspicious deaths which have been brought to his attention. When any coroner has accumulated sufficient records to fill a temporary binder, such records are to be at once permanently bound in book form and transmitted to the clerk of the Superior Court.

Any State's attorney, coroner, chief of police or other law enforcement official may, upon request, secure copies of any record or other information kept in the office of the medical examiner which he deems necessary in the performance of his official duties. The report of the examinations conducted by the chief medical examiner, deputy medical examiner, or an authorized assistant medical examiner and of the autopsy and other scientific findings may be made available to the public only through the office of the medical examiner and in accordance with the regulations of the commission on medico-legal investigations and State law, provided that no person with a legitimate interest therein may be denied access to such records.

All records kept by the coroner, except copies of records received from the office of the medical examiner, are public records and are open to inspection at all reasonable times. Copies of records received from the office of the medical examiner are available only through that office and in accordance with State law.

Connecticut's "public access law" which makes records maintained by any public agency public records, provides for access by next of kin. However, this statute, its applicability, and parameters is the subject of litigation in Connecticut.

Connecticut has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Conn. Gen. Stat. Rev. § 1-19; §§ 6-50, 6-52, 6-57, 6-65; §§ 19-526, 19-527, 19-528, 19-529, 19-530, 19-531, 19-533, 19-535.

DELAWARE

Delaware has established the Office of Medical Examiner under the direction of the Department of Health and Social Services to investigate certain deaths. The administrator and head of the Office of Medical Examiner, who is known as the Medical Examiner of the State of Delaware, is appointed by the Secretary of the Department of Health and Social Services, with the written approval of the Governor, for a term of ten years, for cause. The Medical Examiner is required to be a physician licensed to practice in Delaware and a board certified pathologist, with preference given to applicants with training and experience in the field of forensic pathology.

The Chief Medical Examiner may appoint, with the approval of the Department of Health and Social Services, two Assistant Medical Examiners who are required to be physicians with two years or more of training or experience in pathology, necessary numbers of Deputy Medical Examiners who are required to be practicing physicians, a toxicologist who is required to have a Ph.D. degree in toxicology or pharmacology or a master's degree in toxicology or pharmacology with a minimum of three years of experience in analytical toxicology, and such other personnel as may be necessary for the proper administration of the office.

The various medical examiners are required to investigate the death of any person whose body is unclaimed or is to be cremated, or who dies in Delaware as a result of violence, by suicide or by casualty if such occurred not longer than one year and one day prior to death, while under anesthesia, by abortion or suspected abortion, by poison or suspicion of poison or suddenly when in apparent health or when unattended by a physician or in any prison or penal institution or when in police custody or from a disease resulting from employment including disease related to injury or from an undiagnosed cause which may be related to a disease constituting a threat to public health or in any suspicious or unusual manner.

Any person who issues a permit for cremation under State law or who has knowledge of a death occurring under any of the above described circumstances is required to immediately notify the Chief Medical Examiner, an assistant medical examiner, or a deputy medical examiner who in turn is required to notify the Attorney General of the known facts concerning the time, place, manner and circumstances of the death. Immediately upon receiving such notification, the medical examiner is required to take charge of the dead body if either he or the Attorney General deems it necessary and to promptly notify a relative or close acquaintance of the deceased, if known, of such action.

The medical examiner is required to fully investigate the essential facts concerning the medical causes of death and reduce such facts as he deems necessary to writing and to file such writing in the office of the Chief Medical Examiner. When the cause of death is established within reasonable medical certainty by a medical examiner, he is required to prepare a written report and file it in the office of the Chief Medical Examiner within thirty days after his investigation of the death. When in the judgment of the investigating medical examiner a further investigation is deemed advisable, the Chief Medical Examiner is required to deliver to the Attorney General copies of all records relating to the death. An autopsy is required to be performed by the Chief Medical Examiner, an assistant medical examiner, or by such other competent pathologists as may be designated by the Chief Medical Examiner if in the opinion of the medical examiner an autopsy is necessary in the public interest or if an autopsy is requested by the Attorney General. A detailed report of the findings written during the progress of the autopsy, related laboratory analysis and the conclusions drawn from the findings are required to be filed in the office of the Chief Medical Examiner.

The Chief Medical Examiner is required to keep full and complete records in his office, properly indexed, giving the name, if known, of every deceased person investigated, the place where the body was found, the date and the cause of death and all other available information relating to the death. The original report of the medical examiner and the detailed findings of the autopsy and subsequent laboratory examinations, if any, are required to be attached to the record of each case.

In all deaths investigated by a medical examiner, he is required to certify the cause of death according to his best knowledge and belief.

Upon written request, the next of kin of the deceased may receive from the office of the Chief Medical Examiner a copy of the post mortem examination report, the autopsy report and the laboratory reports, unless there is a criminal prosecution pending in which case no such reports may be released until the criminal prosecution has been concluded.

Vital statistics records may be inspected, and certified copies of death certificates or part of death certificates obtained when the information contained in the record is necessary for the determination of personal or property rights and when the applicant has a direct interest in the matter recorded.

Delaware has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Del. Code Ann. tit. 29, §§ 4703, 4706, 4707, 4709, 7903; tit. 16, §§ 3125, 3110.

FLORIDA

Florida has a district medical examiner death investigation system.

Medical examiner districts are required to be established in Florida by the Medical Examiners Commission. The Medical Examiners Commission, a six person commission within the Department of Health Rehabilitative Services, is required to report on the activities and findings of the several district medical examiners, and to promulgate rules and regulations relative to medical examiners to insure minimum and uniform standards of excellence, performance of duties, and maintenance of records. For each medical examiner district, a district medical examiner is required to be appointed by the Governor from practicing physicians in pathology whose names have been submitted to the Governor by the Medical Examiners Commission. Each district medical examiner may appoint as many physicians to serve at his pleasure as associate medical examiners as he deems necessary to provide service at all times and all places within his district.

District medical examiners are required to determine the cause of death when a dead body is brought into Florida without proper medical certification, or when a body is about to be cremated, dissected, or buried at sea, or when a person dies in Florida of criminal violence; by accident; by suicide; suddenly when in apparent good health; unattended by a practicing physician or other recognized practitioner; in any penal institution; in police custody; in any suspicious or unusual circumstance; by criminal abortion; by poison; by disease constituting a threat to public health; or by disease, injury, or toxic agent resulting from employment.

Whenever a district medical examiner receives notice that a death has occurred or a body has been found in his district under any of the above described circumstances, he or his associate is required to take charge of the dead body and to perform, or have performed, such examinations, investigations, and autopsies, as he deems necessary in the public interest or as are requested by the State attorney. When the district medical examiner or his associate establishes within reasonable medical certainty the cause of death, he is required to report or make available to the State attorney in writing his determination as to the cause of death. He is also required to maintain duplicate copies of records and detailed findings of autopsy and laboratory investigations. If a district medical examiner or associate medical examiner is absent, the State attorney of the county may appoint any competent physician to perform their official duties. The district medical examiner is required to complete and sign the medical certification within forty-eight hours after taking charge of the case.

In home rule counties which have established medical examiners under a home rule charter or code, such medical examiners are required to serve as district medical examiners.

All death investigation records may be inspected and examined by any person desiring to do so, at reasonable times, under reasonable conditions, and under supervision by the custodian of the records. Copies or certified copies of such records are required to be furnished upon payment of fees.

The State Registrar is required to furnish a certified copy of all or any part of any death certificate, excluding that portion which contains the medical certification of cause of death, to any person requesting it upon payment of the prescribed fee. A certified copy of the medical certification of cause of death is required to be furnished only to persons having a direct and tangible interest in the cause of death, as provided by rules and regulations of the Department of Health and Rehabilitative Services.

Florida has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Fla. Stat. § 119.07; 382.35; §§ 406.02, 406.04, 406.05, 406.06, 406.11, 406.13, 406.15, 406.17.

GEORGIA

Georgia's death investigation system consists of county coroners and medical examiners. County coroners are elected by the qualified voters of their respective counties and hold their offices for a term of four years. Licensed physicians and pathologists, designated by the director of the department of public health at convenient locations throughout the State, are required to act as medical examiners in performing post mortem examinations and autopsies. Coroners are required to have an inquest, post mortem examination and/or autopsy performed in their respective counties when any person dies as the result of violence, suicide, or casualty, or suddenly when in apparent health or when unattended by a physician, or within twenty four hours after admission to a hospital without having regained consciousness, or in any suspicious or unusual manner; or when an inmate of a State hospital, or a State, county, or city penal institution dies suddenly without an attending physician, or as a result of violence; or whenever ordered by a court having criminal jurisdiction.

When a coroner receives notice that a death has occurred under any of the above described circumstances, he is required to immediately take charge of the dead body and to summon a medical examiner and proper peace officer. They together are required to make inquiries regarding the cause and manner of death. The medical examiner is required to perform a post mortem examination and if he determines it to be necessary, an autopsy, and to reduce his findings to writing and file them with the director of the State Crime Laboratory. Although the medical examiner is required to give due consideration to the opinions of the peace officer in charge regarding the requirements of accepted investigation techniques and the applicable rules of evidence, it rests in his sole discretion to determine whether or not an autopsy or dissection is required. The medical examiner and peace officer in charge are required to file in triplicate a report of each post mortem examination and/or autopsy and investigation with the director of the State Crime Laboratory, who is required to assign to the reports an appropriate State Crime Laboratory file number and return one copy of the post mortem and/or autopsy report to the medical examiner, one copy of the investigation report to the peace officer in charge and forward one copy each of the post mortem examination and/or autopsy report and investigation report to the coroner who is required to file such reports with the clerk of the Superior Court of the county.[1] In cases where a report is filed with the director of the State Crime Laboratory which indicates a suspicion of foul play, the medical examiner and peace officer in charge are required to transmit with their reports all other evidence to the State Crime Laboratory for verification. If the report indicating foul play is verified by the State Crime Laboratory, the director of the State Crime Laboratory is also required to forward additional copies of such verified report to the solicitor general of the circuit. Upon the completion of the post mortem examination and/or autopsy by the medical examiner and verification by the State Crime Laboratory when such verification is required, the coroner, with certain specific statutory exceptions, is required to impanel a coroner's jury and take an inquest upon the death of such deceased person. In those cases when death occurs without medical attendance or when inquiry is required by law, the medical examiner or coroner is required to complete and sign the medical certification portion of the death certificate within a reasonable time after being notified of death.

All State, county and municipal records are required to be open for a personal inspection of any citizen of Georgia at a reasonable time and place.

Any person, upon payment of a fee, may obtain a certified copy of any death certificate or record in the custody of the Department of Public Health or local custodians of vital records.

Georgia has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.[2]

Footnotes: [1] In Fulton County, copies of the medical examiner's reports are not filed with the clerk of the Superior Court. By department policy, the Fulton County office of the medical examiner releases autopsy reports only to the deceased's immediate next-of-kin and their authorized representatives.

[2] In Fulton County, the office of the medical examiner assumes jurisdiction of these cases under the provision that these deaths occur "suddenly when in apparent health".

Citations: Const., § 2-2701; Ga. Code §§ 21-101, 21-202, 21-203, 21-204, 21-205, 21-209, 21-210; 40-2701; 88-1715, 88-1724; Rules of the Department of Human Resources Ch. 290-1-2.

HAWAII

Hawaii has a county coroner death investigation system. In the counties of Hawaii, Maui, and Kauai, the chief of police or his authorized subordinate in each county is ex officio the coroner for the county. To fill the office of chief of police, a person is required to be a citizen of the United States and of the State, and to have been a duly qualified elector of the State and of the county in which he is elected for at least one year next prior to his election. Each chief of police is elected for a term of two years. In the city and county of Honolulu, the medical examiner is ex officio the coroner for the county. The medical examiner or any of his assistants in the city and county of Honolulu, and any experienced or qualified physician employed by the State or any of its political subdivisions and designated by the coroner in the counties of Hawaii, Maui, and Kauai, is the coroner's physician for such city and county. Each coroner may appoint as many deputy coroners as he deems necessary to aid him in the discharge of his duties as coroner from among the subordinates in his department. Coroners and deputy coroners are required to investigate all deaths which occur as the result of violence, or as the result of any accident, or by suicide, or suddenly when in apparent health, or when unattended by a physician, or in prison, or in a suspicious or unusual manner, or within twenty-four hours after admission to a hospital or institution.

As soon as any coroner or deputy coroner has notice of the death of any person within his jurisdiction under any of the above described circumstances, he is required to immediately inquire into and make a complete investigation of the cause of death. The coroner or deputy coroner is required to reduce his findings to writing and to forward, without delay, to the county attorney in the case of coroners for the counties of Maui and Kauai, and the prosecuting attorney in the case of coroners for the city and county of Honolulu and the county of Hawaii, a true and correct copy of the inquisition.

If in the opinion of the coroner, or of the coroner's physician, or of the prosecuting attorney, or of the chief of police in the city and county of Honolulu, an autopsy of the remains of any human body appearing to have come to death under any of the above described circumstances is necessary in the interest of the public safety or welfare, he is required to perform, or cause to have performed, such an autopsy. If, in the opinion of the coroner's physician, a further or additional investigation as to the cause of death is necessary, he may for this purpose exercise the duties and powers conferred upon the coroner or deputy coroner and conduct such further or additional investigation.

Upon receipt of a certificate of death from the person in charge of the disposition of the body, the coroner's physician is required to certify the name of the disease or condition directly leading to the death; other significant conditions contributing to the death; day on which death occurred; and such other information as may be required on the certificate of death by the director of health in order to classify the death, and to make available without delay the death certificate to the person in charge of the disposition of the body so that he may file the death certificate with the local agent of the department of health.

Upon application and payment of a fee, the coroner or deputy coroner may prepare and issue a certified copy of any coroner's report.

Death certificates are not available for or open to public inspection, except as provided by law, or by regulations promulgated by the department of health. Such regulations provide access to next of kin, among others.

Hawaii has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Hawaii Rev. Stat. §§ 62-1, 62-3, 62-4; 338-9, 338-18; 841-1, 841-2, 841-3, 841-7, 841-8, 841-9, 841-14, 841-18; Rules and Regulations of the Department of Health 8B § 2.5.

IDAHO

Idaho has a county coroner death investigation system. Each county coroner is elected for a term of two years and is required to be twenty-one years of age or older at the time of his election, a citizen of the United States, and a resident of the county for at least one year before his election. Each county coroner may appoint as many deputies as may be necessary for the prompt and faithful discharge of the duties of his office.

When a coroner is informed that a person has been killed, or has committed suicide, or has suddenly died under such circumstances as to afford a reasonable ground to suspect that his death was occasioned by the act of another by criminal means[1], he is required to go to the place where the body is and to summon a coroner's jury to appear before him at the place where the body of the deceased is to inquire into the cause of the death.[2] The coroner is required to summon and examine as witnesses every person who, in his opinion, or that of any of the jury, has any knowledge of the facts, and may summon a surgeon or physician to inspect the body and give a professional opinion as to the cause of death.[3]

The testimony of the witnesses examined before the coroner's jury is required to be reduced to writing by the coroner and filed by him with the inquisition, in the office of the clerk of the district court of the county.

Coroners are also required to investigate and supply the necessary medical data and certify to the cause of death in those cases in which no physician was in attendance during the last illness of the deceased, is physically unable to supply the data, or in which the circumstances suggest that the death occurred as a result of other than natural causes.[4]

Death certificates and records in the custody of the State Registrar are open to inspection subject to State law and regulations of the State board of health. A complete copy, or any part of a death certificate, may be issued to any applicant who can show direct and tangible interest in the record he applies for.[5]

Idaho has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.[6]

Footnotes: [1] Through the Bureau of Vital Statistics and an opinion of the Attorney General, coroners are not to have jurisdiction over all specified deaths other than natural even if such death occurs in a medical facility.

[2] In actual practice, inquests are conducted only when there is no available evidence concerning a death.

[3] The coroners are free to utilize any services needed in conducting a death investigation.

[4] An extensive continuing education program has been funded for the coroners and has been utilized in obtaining homicide investigation schooling for coroners.

[5] As a matter of administrative practice, upon request by a family member a coroner will provide copies of autopsy reports to next of kin.

[6] A discretionary and voluntary SIDS program has been implemented statewide.

Citations: Const., Art. 18, § 6; Idaho Code §§ 19-4301, 19-4303, 19-4306; 31-2002, 31-2003; 34-622; 39-258, 39-264.

ILLINOIS

Illinois has a county coroner death investigation system. Each county may elect for a term of four years, or appoint, a coroner. The office of coroner may be eliminated and the term of office and manner of selection changed by county-wide referendum or by law. In any county which provides by resolution for the elimination of the office of coroner pursuant to a referendum, such resolution may also provide that as part of the same proposition that the duties of the coroner be taken over by another county officer specified by the resolution and proposition. Each coroner may appoint one or more deputies, not exceeding the number allowed by rule of the circuit court of his county, to perform any and all duties of the coroner in the name of the coroner.

Coroners and deputy coroners are required to investigate any death which is: a sudden or violent death, whether apparently suicidal, homicidal or accidental, including but not limited to deaths apparently caused or contributed to by thermal, traumatic, chemical, electrical or radiational injury, or a complication of any of them, or by drowning or suffocation; a maternal or fetal death due to abortion, or any death due to a sex crime or a crime against nature; a death where the circumstances are suspicious, obscure or mysterious or where, in the written opinion of the attending physician, the cause of death is not determined; a death where addiction to alcohol or to any drug may have been a contributory cause; a death where the decedent was not attended by a licensed physician; or a death in a State institution or the death of a ward of the State in a private care facility or in a program funded by the Department of Mental Health and Developmental Disabilities or the Department of Children and Family Services where there is reason to believe that an investigation is needed to determine whether the death was caused by maltreatment or negligent care of the ward of the State.

Whenever a coroner knows or is informed that the dead body of any person is found, or lying within his county, whose death is suspected of occurring under any of the above described circumstances, he is required to go to the place where the dead body is and take charge of the body, and make a preliminary investigation into the circumstances of the death. In his discretion, the coroner is required to notify a physician duly licensed to practice medicine in all of its branches, and wherever possible one having special training in pathology, to attempt to ascertain the cause of death. Where the circumstances concerning a death are suspicious, obscure, mysterious, and in the opinion of the examining physician and the coroner the cause of death cannot be established definitely except by autopsy, the coroner is required in the public interest to cause an autopsy to be performed. The examining physician is required to file copies of the report or results of his autopsies and medical examinations with the coroner and also with the department of public health.

In cases of apparent suicide or homicide or of accidental death, the coroner is required to, and in all other cases in his discretion he may summon a jury of six persons of lawful age residing in the vicinity where the death occurred, and conduct an inquest into the cause of death.

Every coroner is required to enter, in proper record books, the name, if known, of each person upon whose body an inquest is held, together with the names of the jurors comprising the jury, the names, residences and occupations of the witnesses who are sworn and examined, and the verdict of the jury. If the name of the person deceased is not known, the coroner is required to make out a description of the person, and enter the same upon the record book to be so kept by him, together with all such facts and circumstances attending the death which may be known, and which may lead to the identification of the person.

As soon as the coroner has completed his investigation of the cause and circumstances of any death coming within his jurisdiction, he is required to issue a death certificate.

Under Illinois law, access to vital records and indexes to vital records, is limited to the custodian and his employees.

Certified copies of death certificates are required to be issued, upon specific written request, to any person, or his duly authorized agent, having a personal or property right interest in the record.

Apparently, access to autopsy reports can be gained through the application of this jurisdiction's "public access" statute, which provides same to all records maintained by public agencies.

Illinois has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Const., Art. 7, § 4;
Il. Rev. Stat. Ch. 31, §§ 1, 10, 10.1, 10.2, 10.4, 20, 27, 29;
Ch. 111 1/2 §§ 73-24, 73-25.

INDIANA

Indiana has a county coroner death investigation system. Each county coroner is elected by the voters of the county for a term of four years, is commissioned by the Governor and is required to reside within the county during his term of office. No person may be elected as county coroner who is not an elector of that county, nor may any person be eligible to the office of coroner more than eight years in any twelve year period. Every county coroner is required to investigate the death of any person from violence or by casualty or by death when in apparent good health, or when found dead, or found in any suspicious, unusual or unnatural manner.

As soon as the county coroner is notified of any death occurring within his county under any of the above described circumstances, he is required before the scene is disturbed to notify a police agency having jurisdiction in that area to assist him in the investigation to determine how and in what manner the deceased came to his death and to have a medical investigation made in order to determine the cause of death. If the county coroner deems it necessary in the discharge of his duties to have an autopsy performed, he may employ a physician possessing the education and training that meets the standards established by the American board of pathology for certification or a physician holding an unlimited license to practice medicine in Indiana acting under the direction of such qualified physician to perform the autopsy. If the cause of death can be established with reasonable certainty within the statutory time limit, the county coroner is required to file with the local registrar a coroner's certificate of death. If the cause of death cannot be established with reasonable certainty within the statutory time limit, the county coroner is required to file with the person in charge of internment a coroner's certificate of death with the cause of death designated as "deferred pending further action". As soon as the cause of death is determined, the county coroner is required to file with the local health officer having jurisdiction a supplemental report indicating the exact findings of the examination. All supplemental reports so filed become a part of the official records of the health officer having jurisdiction.

The county coroner is also required to make and file a written report in the office of the clerk of the circuit court of the county in which the body of the deceased was found.

Every citizen of Indiana, during the regular business hours, has the right to inspect the public records of county coroners and local health officers and to make memoranda abstracts from the records so inspected.

Upon request, any person may obtain a death certificate from the local health officer.

Indiana has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Const., Art. 6, §§ 2, 4; Ind. Code § 5-14-1-3; §§ 17-3-17-0.1, 17-3-17-1, 17-3-17-4, 17-3-17-8.

IOWA

Iowa's death investigation system consists of county medical examiners and a State medical examiner.

The State medical examiner is required to be a physician and surgeon or osteopathic physician and surgeon and be licensed to practice medicine in the State of Iowa, and possess special knowledge in forensic pathology. He is appointed by and serves at the pleasure of the Governor. The State medical examiner is required to provide assistance, consultation, and training to county medical examiners and law enforcement officials; to keep complete records of all relevant information concerning deaths or crimes requiring investigation by the State medical examiner; and to promulgate rules relative to the investigation of homicides, conduct of autopsies, and reports rendered by medical examiners.

A county medical examiner is required to be appointed in each county for a term of two years by the board of supervisors of the county from lists of two or more names submitted by the medical society and the osteopathic society of the county. Each county medical examiner is required to be licensed in Iowa as a doctor of medicine and surgery, as a doctor of osteopathic medicine and surgery, or as an osteopathic physician. The board of supervisors of each county may provide such laboratory facilities, deputy medical examiners, and other professional, technical, and clerical assistance as may be required, by the county medical examiner in the performance of his duties, subject to prior approval by the State medical examiner.

County medical examiners are required to investigate human deaths where determination of the cause of death is in the public interest including violent deaths, including homicidal, suicidal, or accidental deaths; deaths caused by thermal, chemical, electrical or radiation injury; deaths caused by criminal abortion including those self-induced, or by rape, carnal knowledge, or crimes against nature; deaths related to disease thought to be virulent or contagious, which might constitute a public hazard; deaths that have occurred unexpectedly, or from unexplained causes; deaths of persons confined in any prison, jail or correctional institution; deaths of persons where a physician was not in attendance at any time at least thirty-six hours preceding death, with the exception of prediagnosed terminal or bedfast cases for which the time period shall be extended to twenty days; deaths of persons where the bodies are not claimed by relatives or friends; and deaths of all persons where the identity of the deceased is unknown.

Whenever a county medical examiner or the State medical examiner is notified that a death has occurred under any of the above described circumstances, he is required to notify the city or State law enforcement agency or county sheriff and take charge of the body. The county medical examiner is required to make inquiries regarding the cause and manner of death, reduce his findings to writing, and promptly make and deliver a full report to the State medical examiner with a copy to the county attorney. The county medical examiner is required to conduct such investigation as the State medical examiner may require and to determine whether or not the public interest requires an autopsy or other special investigation. In his determination of the need for an autopsy, the county medical examiner may consider the request for an autopsy made by private persons or public officials, except that the State medical examiner or the county attorney may require the county medical examiner to have an autopsy performed.

A complete record of the findings of the person making an autopsy is required to be promptly made and filed in the office of the State medical examiner and the county attorney of the county in which any injury contributing to or causing death was sustained. Within twenty-four hours after taking charge of the case, the county medical examiner is required to complete and sign the medical certification of cause of death on the death certificate.

Every citizen of Iowa has the right to examine and to copy the State medical examiner's public records.

Death certificates in the custody of a local registrar may be inspected and copied by any citizen of Iowa. Death certificates kept by the State Registrar may be inspected or copied only as authorized by law, or by regulations promulgated by the State department of health.

Iowa has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Iowa Code § 43 (1-4); § 68A.2; §§ 144.28, 144.43; §§ 339.1, 339.2, 339.3, 339.4, 339.6, 339.7, 339.8; §§ 749A.5, 749A.6.

KANSAS

Kansas has a district coroner death investigation system. A district coroner is appointed by the district judge or judges in each judicial district for a term of four years. He is required to be a resident of the State of Kansas licensed to practice medicine and surgery by the State board of healing arts, or a resident of a military or other federal enclave within the State and duly licensed to practice medicine and surgery within such enclave. A district coroner may, with the approval of the district judge or judges, appoint one or more deputy coroners to assist him in the discharge of his duties. Each deputy coroner so appointed is required to have the same qualifications as a district coroner. The district coroners are required to investigate those deaths which are suspected to have been the result of violence, caused by unlawful means, or by suicide, or by casualty, or suddenly when the decedent was in apparent health, or when the decedent was not regularly attended by a licensed physician, or in any suspicious or unusual manner, or when the determination of the cause of death is held to be in the public interest.

When a coroner or deputy coroner receives notice that any person has died or that a human body has been found dead in his county, he is required to take charge of the dead body, make inquiries regarding the cause of death, and reduce his findings to a report in writing. If the death of any person is caused by unlawful means or if the cause of death is unknown, the coroner is required to summon a jury of six residents of the county to hold an inquest upon the dead body to inquire into the cause of death. If, in the opinion of the coroner, it is advisable and in the public interest that an autopsy be made, or if an autopsy is requested in writing by the county or district attorney, the coroner or a competent pathologist or other licensed physician designated by the coroner is required to perform an autopsy. A full record and report of the facts developed by the autopsy, and findings of the person making the autopsy, are required to be promptly made and filed with the coroner.

Each coroner is required to reduce his findings in each death investigated by him to a report in writing and to file such report with the county clerk of the county in which the death occurred.

When death occurs without medical attendance or when inquiry is required by the laws relating to post mortem examinations, the coroner is required to investigate and to complete and sign the medical certification of the cause of death on the death certificate within 24 hours after taking charge of the case.

Each report filed by a coroner with a county clerk and all records and reports of every coroner are required at all times to be open for a personal inspection by any citizen.

Inspection of vital statistics records or certified copies of any death certificate or part of a death certificate may be obtained from the State Registrar when the information contained in such records is necessary for the determination of personal or property rights by any applicant who has a direct interest in the matter recorded.

Kansas has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Kan. Stat. Ann. §§ 19-1026, 19-1030, 19-1031, 19-1032, 19-1033, 19-2601; § 45-201; §§ 65-2412, 65-2422.

KENTUCKY

Kentucky has a county coroner death investigation system. In each county, a coroner is elected to serve for a term of four years. No person is eligible for the office of coroner who is not at the time of his election twenty-four years of age, a citizen of Kentucky, and who has not resided in the State two years, and one year next preceding his election in the county in which he is a candidate. Each coroner may appoint a maximum of two deputy coroners to hold inquests and act as coroner in the absence of the coroner or at any time authorized by the coroner.

Kentucky has established a medical examiner service program within the department for human resources to aid, assist and complement the coroner in the performance of his duties by providing medical assistance to him in determining causes of death. The department for human resources may establish or contract for physical facilities for the conduct of post mortem and other necessary examinations and employ physicians licensed to practice medicine in Kentucky or may designate county health officers as county or district medical examiners to provide medical assistance to coroners in investigating deaths. Where a duly elected coroner is a physician licensed to practice medicine in Kentucky, he may be authorized by the department for human resources to perform the duties of a county or district medical examiner. Pathologists, toxicologists and other ancillary, technical and administrative personnel may also be employed by the department for human resources to perform autopsies and such other pathological, chemical and other studies and examinations as may be deemed necessary.

Each coroner, upon the request by any responsible citizen or if he has reason to believe the death of a human being within his county was caused by crime, suicide, drowning or sudden cause, or death occurs without the attendance of a physician within a period of thirty-six hours prior to death, is required to investigate and hold an inquest in the county where death occurs. The coroner is required to summon a coroner's jury and hold an inquest only upon the request of some member of the deceased's family, or in cases of probable homicide, or where death was caused by the negligence of some person other than the deceased. If death results from violence or accident within one hundred eighty days from the onset, the coroner is required to hold an inquest the same as if the death had occurred immediately.

At the request of the coroner, a county or district medical examiner is required to assist in the investigation of any death. If in the opinion of the coroner it is necessary to have a post mortem examination or autopsy of a dead person during an inquest, he may employ a competent surgeon or physician for that purpose. In addition, in cities of the first or second class, an autopsy may be ordered to be performed by the county judge or the city judge. Coroners are also required to investigate those deaths which occur without a physician in attendance, where the body is to be cremated, or transported out of Kentucky for burial.

In any case when it is the duty of the coroner to hold an inquest on the body of the deceased person, he is required to make the certificate of death required for a burial permit and state in his certificate the nature of the disease or other cause of death. If the death was from external causes of violence, he is also required to state whether in his opinion the death was accidental, suicidal or homicidal. In all cases investigated by him, the coroner is required to furnish the information required by the department for human resources to properly classify the death. The department for human resources is required to provide for the keeping of reports of all investigations and examinations.

In accordance with new legislation enacted in 1976, all books, papers, maps, photographs, cards, tapes, discs, recordings or other documentary materials regardless of physical form or characteristics which are prepared, owned, used, in the possession of or retained by a public agency shall be public records. Therefore, the Medical Examiner autopsy reports would be accessible to the public and the next of kin. Records of law enforcement agencies or agencies involved in administrative adjudication that were compiled in the process of detecting and investigating statutory or regulatory violations if the identity of the informants not otherwise known or by premature release of information to be used in a prospective law enforcement action or administrative adjudication shall not be open to the public.

At this time there are no specific rules or regulations that have been promulgated relative to autopsy reports by next of kin.

Upon request and payment of a reasonable fee, the department for human resources is required to furnish a certified copy of any records of death kept by the department to any applicant who has a direct, tangible, and legitimate interest in the information or record requested.

Kentucky has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Const., §§ 99, 100; Ky. Rev. Stat. Ann. §§ 72.030, 72.040, 72.050, 72.070, 72.072, 72.220, 72.235, 72.240, 72.245, 72.260, 72.265; § 171.650; §§ 213.090, 213.190.

LOUISIANA

Louisiana has a parish coroner death investigation system. Each parish is required to elect a coroner for a term of four years. Except in any parish in which no licensed physician will accept the office, each coroner is required to be a licensed physician. The coroner of each parish may be either or both ex-officio parish physician and parish health officer. Each coroner may appoint deputy or assistant coroners to perform his duties who possess the same qualifications as he does.

Coroners are required either to view the body or make an investigation in all cases of suspicious, unexpected, unusual deaths, sudden deaths, violent deaths, deaths due to unknown or obscure causes or in any unusual manner, bodies found dead, deaths without attending physician within thirty-six hours prior to the hour of death, any case of suspected abortion whether self-induced or otherwise, deaths due to suspected suicide or homicide, deaths in which poison is suspected, any death from natural causes occurring in a hospital under twenty-four hours after admission, unless seen by a physician in the last thirty-six hours, death following an injury or accident, either old or recent, deaths due to drowning, hanging, burns, electrocution, gunshot wounds, stabs or cutting, lightning, starvation, radiation, exposure, alcoholism, addiction, tetanus, any from strangulation, suffocation, or smothering, deaths due to trauma from whatever cause, premature births, stillborn deaths, deaths due to criminal means or by casualty, deaths in prison or while serving a sentence, deaths due to virulent contagious disease that might be caused by or cause a public hazard, and all cases of alleged rape, simple and aggravated, carnal knowledge and crimes against nature.

In his discretion a coroner may perform or cause to be performed an autopsy by a competent physician. In the parish of Orleans, the coroner is required to hold autopsies and conduct post mortem examinations in all cases of violent deaths and in all other cases when ordered by the court. In any case in which an autopsy is not held, the coroner is required to issue a certificate which certifies that having viewed the body and made inquiry respecting the death he is satisfied that no guilt attaches to any person by reason of such death and that an autopsy is unnecessary. This certificate is required to be filed in the office of recorder of births and deaths.

Every coroner is required to furnish a death certification based on his examination, investigation or autopsy stating the cause and means of death, and if it appears that death be due to accident, suicide, or homicide. In case of any death without medical attendance if no suspicion of death from violence, casualty or undue means exists, the coroner may without the necessity of holding an investigation make the certificate of death from the statement of relatives, persons in attendance during the last sickness, persons present at the time of death, or other persons having adequate knowledge of the facts.

All certificates of death are required to be filed with the local registration district in which the death occurred. The parish coroner, or any person acting in that capacity and conducting a post mortem examination is required within thirty days to furnish the proces verbal of the proceedings of the post mortem examination, to the clerk of the parish court for filing. Where the facilities permit, all such records may be kept in the coroner's office.

The clerk of each parish court, except in Orleans parish, is required to keep a suitable book known as the book of autopsies to be open to the public at any time during office hours for inspection and in which must be inscribed the proces verbal of the proceedings of the post mortem examinations.

The State Registrar and the local registrar for the parish of Orleans may not permit the inspection of vital statistics records or issue a death certificate or any part of a death certificate in their custody, unless they are satisfied that the applicant for such record has a direct ascendant or descendant relationship with the deceased, or is named in a court proceeding as an heir; to such person the records are open to inspection and, upon payment of a fee, can obtain copies.

In Louisiana, a coroner is required to state clearly on the death certificate of any infant under the age of one year that the cause of death is sudden infant death syndrome where the findings so warrant. In such a case, the coroner is further required, in writing or by other means of communication and within forty-eight hours of such findings, to notify the director of the parish health unit of such provisional diagnosis, namely sudden infant death syndrome. The director of the parish health unit or his agent, after consultation with the infant's physician of record, is required in turn, in writing, and within forty-eight hours of notification of the coroner, to notify the person or persons who had custody and control of the infant and explain to such persons the nature and causes of sudden infant death syndrome to the extent that current knowledge permits.

Citations: La. Rev. Stat. Ann.
Art. 5, § 29 (Const. of 1975); §§ 40:56,
40:158: §§ 33:1552, 33:1556, 33:1561,
33:1561.3, 33:1562, 33:1565;
Act # 352, S.B. 98, 1976.

MAINE

Maine has a medical examiner death investigation system. A Chief Medical Examiner for the State of Maine is appointed by the Governor for a term of seven years. The Chief Medical Examiner is required to possess a degree of doctor of medicine or doctor of osteopathy, be licensed to practice in the State of Maine, and be certified in the specialty of forensic pathology by either the American Board of Pathology or the American Osteopathic Board of Pathology. The Chief Medical Examiner is required to appoint medical examiners who have State-wide jurisdiction and who serve at the pleasure of the Chief Medical Examiner and are subject to his control. Each medical examiner is appointed by the Chief Medical Examiner, is required to be learned in the science of medicine and anatomy, licensed as a physician in the State of Maine, and a bona fide resident of the State of Maine.

Medical Examiners are required to investigate those deaths where a person is supposed to have come to his death by violence, or by the action of chemical, thermal, or electrical agents, or following abortion, or suddenly when not disabled by recognizable disease or where a person has come to his death unexplained or unattended, or has died without the attendance of a physician. The Chief Medical Examiner is required to promulgate, by proper rule and regulation, complete directions as to the nature, character and extent of the investigation to be made where medical examiners are involved, together with appropriate forms for the required reports and instructions for the medical examiner's use.

Upon receiving notice that a death has occurred under any of the above described circumstances, the medical examiner is required to take charge of the dead body, make inquiries regarding the cause and manner of death, reduce his findings to writing, and promptly make a full report of his findings to the Chief Medical Examiner retaining one copy of his report for his own. If, in the opinion of the medical examiner, the Chief Medical Examiner, the county attorney, or the Attorney General, it is advisable and in the public interest that an autopsy be made, an autopsy is required to be made by the Chief Medical Examiner, or by such pathologist as may be designated by the Chief Medical Examiner.

A full record and report of the facts developed by the autopsy and findings of the person making the autopsy are required to be properly made and filed with the medical examiner and the Chief Medical Examiner. If, in the opinion of the Chief Medical Examiner, it is proper or if requested by the county attorney for the county in which the body was found or the Attorney General, a copy of the report of the autopsy is required to be furnished to such county attorney or the Attorney General by the Chief Medical Examiner. The Chief Medical Examiner may, upon request of the county attorney, the Attorney General or a law enforcement officer, direct a medical examiner to make such medical examinations of victims of crimes of violence as he may deem appropriate.

In all cases investigated by a medical examiner or when death occurs without medical attendance, the medical examiner is required to complete and sign the medical certification of the cause of death on the death certificate and verify or provide the date of death within twenty-four hours after death.

Custodians of certificates and records of death may permit inspection of records, or issue certified copies of certificates of records, or any parts of such records, when satisfied that the applicant has a direct and legitimate interest in the matter recorded.

Except in homicide cases, reports in the Office of the Chief Medical Examiner, including autopsy reports, are available to the next of kin upon request. In homicide cases only, such request is forwarded to the Attorney General for a decision on the release of the report.

Whenever a child who has not attained his or her third birthday dies without medical attendance, the medical examiner who examines the body is required to make a special report of the death to the Chief Medical Examiner within seventy-two hours of the time of death including the circumstances surrounding the death, the gross findings at autopsy, or the reasons why an autopsy was not performed, the cause of death as listed on the death certificate, and any other information the Chief Medical Examiner may specify. The report is required to be submitted on a form and in a format specified by the Chief Medical Examiner. The Chief Medical Examiner may specify that such reports be directed to the Director of Health, Department of Health and Welfare.

Citations: Me. Rev. Stat. Ann. tit. 22, §§ 2706, 2842; §§ 3022, 3023 3025, 3026, 3027, 3028, 3030, 3032.

MARYLAND

Maryland has a medical examiner death investigation system with the power of appointment in the commission which heads the Department of Postmortem Examiners. The commission, which consists of the professor of pathology of the University of Maryland, the professor of pathology of the John Hopkins University, a representative of the State Department of Health selected by the Secretary of Health and Mental Hygiene, the commissioner of health of Baltimore City and the Superintendent of the Maryland State Police, is required to appoint a chief medical examiner, an assistant deputy chief medical examiner, four assistant medical examiners, a toxicologist, two assistant toxicologists, a serologist, four residents training in forensic pathology, and a chief traffic investigator. In addition, the commission is required to appoint a deputy medical examiner for each county in the State. The commission may appoint additional deputy medical examiners for any county whenever in its discretion the commission deems it necessary or desirable to do so. Each of the various medical examiners is required to be a licensed doctor of medicine. The chief medical examiner, assistant deputy chief medical examiner, and four assistant medical examiners are also required to have had at least two years post-graduate training in pathology.

The medical examiners are required to investigate those deaths of persons who die as a result of violence, or by suicide, or by casualty, or suddenly when in apparent health or when unattended by a physician or in any suspicious or unusual manner.

When any medical examiner is notified that a person has died in Baltimore City, or in any county of the State, under any of the above described circumstances, he is required to go to and take charge of the dead body, and to fully investigate the essential facts concerning the medical causes of death. The medical examiner may take the names and addresses of as many witnesses as may be practicable to obtain, and, before leaving the premises is required to reduce such facts as he deems necessary to writing and file such report in his office. If the medical examiner establishes the cause of death beyond a reasonable doubt, he is required to file such report in his office within thirty days after his notification of the death. If, however, in the opinion of the medical examiner, an autopsy is necessary or desirable, an autopsy is required to be performed by the chief medical examiner, an assistant medical examiner or by such competent pathologists as may be authorized by the chief medical examiner.

A detailed description of the findings written during the progress of an autopsy, and the conclusions drawn from such findings, are required to be filed in the office of the chief medical examiner, or in the office of the deputy medical examiner in the county where the death occurred. A copy of the findings and conclusions as to the autopsies performed in the several counties is also required to be filed in the office of the chief medical examiner. The medical examiner in charge of the dead body is required to fill out and sign the certificate of death.

The chief medical examiner, and the deputy medical examiners are required to keep full and complete records in their respective offices, properly indexed, giving the name, if known, of every person whose death is investigated, the place where the body was found, date and cause of death, and all other available information. The original report of the chief medical examiner, assistant medical examiners, or deputy medical examiners, and the detailed findings of the autopsy, if any, are required to be attached to the record of each case. The chief medical examiner, or in case of his absence or inability, an assistant medical examiner, and the deputy medical examiners, are required to promptly deliver to the State's attorney of Baltimore City, or the State's attorney of the county, as the case may be, copies of all records relating to every death, in which, in the judgment of the medical examiner, further investigation may be deemed advisable.

All records kept by the chief medical examiner, and the deputy medical examiners, are required to be open for inspection by any person at reasonable times. Copies, printouts or photographs of such records may be made by any person upon payment of a reasonable fee.

Upon request, a certified copy or abridged copy of any death certificate registered under law is required to be furnished to any properly authorized person by the State Board of Health and Mental Hygiene or the commissioner of health of Baltimore City.

Maryland has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Md. Ann. Code Art. 22, §§ 1, 2, 3, 6, 7, 8; Art. 43, § 20; Art. 76A, §§ 1, 2, 3, 4.

MASSACHUSETTS

Massachusetts has a medical examiner and associate medical examiner death investigation system. Each medical examiner and associate medical examiner is appointed by the Governor for their respective counties, and for their respective districts in counties divided into districts, for a term of seven years. Each medical examiner and associate medical examiner is required to be an able and discreet person, learned in the science of medicine. Medical examiners and associate medical examiners are required to inquire into those deaths where a person is supposed to have died by violence or by the action of chemical, thermal, or electrical agents or following induced abortion or from diseases resulting from injury or infection relating to occupation, or suddenly when not disabled by recognizable disease, or where a person is found dead.

Upon receiving notification that a death has occurred under any of the above described circumstances, a medical examiner is required to carefully inquire into the cause and circumstances of the death and if, as a result of such inquiry, he is of the opinion that death may have resulted from violence or unnatural causes, he is required to go to and take charge of the dead body. Upon taking charge of the dead body, the medical examiner is required to carefully note the appearance, the condition and position of the body and record every fact and circumstance tending to show the cause and manner of death. If on view of the dead body and after personal inquiry into the cause and manner of death, the medical examiner considers a further examination necessary in the public interest, he is required to notify the district attorney of the district and county within whose jurisdiction the bodies of his intention to make such further examination.

After the district attorney or his representative has viewed the body or has given notice that he does not desire to do so, the medical examiner may, and, if he is requested by the district attorney or the Attorney General, is required to, make or cause to be made in his presence an autopsy on the dead body. Such an autopsy is required to be performed in the presence of two or more discreet persons whose attendance the medical examiner may compel by subpoena. The medical examiner may also and, if requested by the district attorney of the county where the body lies, is required to, employ the services of pathologists, chemists or other experts to aid in the examination of the dead body. At the time of the autopsy, the medical examiner is required to record or cause to be recorded each fact and circumstance tending to show the condition of the body and the cause and manner of death.

The medical examiner is required to immediately file with the district attorney for his district a report of each autopsy and view and of his personal inquiries, with a certificate that in his judgment the manner and cause of death could not be ascertained by view and inquiry and that an autopsy was necessary. If upon such view, personal inquiry or autopsy, the medical examiner is of the opinion that death may have been caused by the act or negligence of another, he is required at once to notify the appropriate district attorney and justice of the district court and to file with such district attorney and justice, or in his court, an attested copy of the view and his personal inquiries, and a copy of the record of the autopsy.

The medical examiner in all cases is required to immediately certify to the town clerk or registrar in the place where the deceased died, and to the department of industrial accidents in cases where death, in his opinion, was caused by or related to the occupation of the deceased, and to the registrar of motor vehicles in cases where death, in his opinion, was related to the operation of a motor vehicle, the name and residence, if known, of the deceased.

Every person having custody of any public records is required, at reasonable times and without unreasonable delay, to permit such records to be inspected and examined by any person, under his supervision, and to furnish one copy of any record on payment of a reasonable fee.

In Massachusetts, the parent or legal guardian or any police officer or physician who knows of the death of any child under the age of two years, is required to immediately notify the medical examiner of the district of the county in which the body lies of such death. The medical examiner in turn is required to notify the parent or legal guardian of the child that, if the parent or legal guardian consents, an autopsy will be performed on the child, the costs of which will be borne by the commonwealth. Any parent or legal guardian who consents to such an autopsy is required to be notified of the results of the autopsy as to the cause of death.

Citations: Mass. Gen. Laws Ann. Ch. 38, §§ 1, 6, 6C, 7; Ch. 66, § 10.

MICHIGAN

Michigan has a county medical examiner death investigation system.

In each county, the board of supervisors is required to appoint a county medical examiner to hold office for a period of four years. In counties having a civil service system, the appointment and tenure of the medical examiner is required to be made in accordance with the provisions of such system. County medical examiners are required to be physicians licensed to practice in Michigan and residents of the county for which they are appointed or of a neighboring county. Two or more adjoining counties may, by resolution of their respective board of supervisors, enter into common agreement to employ the same person to act as medical examiner for all of the counties. Any county having a county health officer may designate the county health officer as medical examiner. In counties having a population of 50,000 or more, the board of supervisors may appoint as a deputy medical examiner any person who is a physician licensed to practice in Michigan and who is approved by the county medical examiner. In counties having a population of less than 50,000, the board of supervisors may appoint as deputy medical examiner any person who is a physician, dentist, registered nurse or mortician licensed to practice in Michigan and who is approved by the county medical examiner. In counties having a civil service system, the county medical examiner is required to appoint deputy medical examiners. All deputy county medical examiners are required to be residents of the county from which they are appointed.

Each county medical examiner is in charge of the office of the county medical examiner and may promulgate rules relative to the conduct of his office. He may delegate any functions of his office to a duly appointed deputy county medical examiner if the deputy county medical examiner is a licensed physician. If the deputy county medical examiner is not a licensed physician, his functions are limited as provided by law. County medical examiners or deputy county medical examiners are required to investigate the cause and manner of death in all cases of persons who have come to their death by violence; or whose death was unexpected; or without medical attendance during the forty-eight hours before the hour of death unless the attending physician, if any, is able to determine accurately the cause of death; or as the result of an abortion, whether self-induced or otherwise. If any prisoner in any county or city jail dies while he is imprisoned, the county medical examiner upon being notified of the death of the prisoner, is required to examine the body of the deceased person.

When a county medical examiner is notified that there has been found or is lying within his county or district the body of a person who is supposed to have come to his death in any of the above described circumstances, he is required to immediately go to the place where the body is and take charge of it. If, on view of the body and personal inquiry into the cause and manner of death, he deems a further examination necessary, the county medical examiner or his deputy may cause such dead body to be removed to a morgue. The medical examiner may designate a law enforcement officer or a representative to go to the place where the body lies and take charge of it, make pertinent inquiry, note the circumstances surrounding the death, and, if deemed necessary, cause the body to be transported to the morgue for examination by the medical examiner.

The county medical examiner may perform or direct to be performed an autopsy whenever be determines that an autopsy reasonably appears to be required pursuant to law. Each county medical examiner is required, after any required examination or autopsy, to promptly deliver or return the body to the relatives or representatives of the deceased or, if there are no relatives or representatives known to the county medical examiner, he may cause the body to be decently buried.

Upon the written order of the prosecuting attorney or the Attorney General or upon the filing of a petition signed by six electors of a county, the county medical examiner or his deputy is required to conduct an investigation into the circumstances surrounding any death believed to have occurred in the county. Upon determination of the county medical examiner, an inquest is required to be held by a district or municipal court judge.

If a death which a county medical examiner is required to investigate occurs without medical attendance, the county medical examiner who conducts the investigation is required to certify as to the cause of death on the death certificate. If the death resulted from violence, the county medical examiner is also required to state the cause of violence and whether or not it was apparently accidental, suicidal or homicidal and to furnish such further information as may be required by the State commissioner of health.

County medical examiners are required to keep a record of all views of bodies found dead, together with their view and autopsy reports.

All records of the county medical examiners are open to inspection and examination to any person having occasion to make examination of them for any lawful purpose.

A certified copy of any death certificate may be obtained from the State director of public health upon request and payment of the prescribed fee.

When a child under the age of two years dies under circumstances of sudden death, cause unknown, or found dead, cause unknown, such death is required to be immediately reported to the county medical examiner of the county in which the body lies. Upon such death being so reported, the county medical examiner is required to inform the parents or legal guardians of the child that they may request an autopsy performed on the child, the costs of which are to be borne by the State. An autopsy requested by the parents or legal guardians is required to be arranged for by the county medical examiner and the parents or legal guardians are required to be promptly notified of the results of the autopsy.

Citations: Mich. Comp. Laws Ann. §§ 52.201, 52.201a, 52.201b, 52.201c, 52.201d, 52.202, 52.205, 52.205a, 52.207, 52.211, 52.213a, 52.213c; § 326.16; § 750.492.

MINNESOTA

Minnesota's death investigation system consists of county coroners and county medical examiners. Each county, except for Hennepin County and those counties which have elected to be bound by those provisions of law relative to the investigation of deaths by a medical examiner, is required to elect or appoint a coroner for a fixed term.

In those counties which are required to elect a coroner, a coroner is required to be elected for a term of four years. In any such county, the board of commissioners may by resolution provide for the appointment of a coroner for such term not to exceed four years as may be determined by the board of county commissioners. Each coroner, whether elected or appointed, is required to be a person who has in the course of his education or professional training successfully completed academic courses in the subjects of pharmacology, surgery, pathology, toxicology, and physiology. Every coroner is required to appoint one or more deputies who, in the absence or inability of the coroner to act, have the same powers and are subject to the same liabilities as coroners.

Each coroner is required to investigate and may conduct inquests in all of the following human deaths: violent deaths, whether apparently homicidal, suicidal or accidental, including but not limited to deaths due to thermal, chemical, electrical or radiational injury, and deaths due to criminal abortion, whether apparently self-induced or not; deaths under unusual or mysterious circumstances; deaths of persons whose bodies are to be cremated, buried at sea or otherwise disposed of so as to be thereafter unavailable for examination; and deaths of inmates of public institutions who are not hospitalized therein for organic disease.

The coroner may conduct an autopsy in any case of such human death when in his judgment the public interest requires an autopsy. However, if the death being investigated is that of a person whose body is to be cremated, dissected, buried at sea or otherwise disposed of so as to be thereafter unavailable for examination, or, is that of an inmate of a public institution who is not hospitalized therein for organic disease, no autopsy may be conducted unless the surviving spouse, or next of kin if there is no surviving spouse, consents thereto, or unless the appropriate district court orders an autopsy.

When a coroner or his deputy is notified of any such death, he is required to proceed to and take charge of the body. If during any investigation the coroner is of the opinion that the assistance of pathologists, toxicologists, deputy coroners, laboratory technicians, or other medical experts is necessary to determine the cause of death, he may secure their assistance. Each coroner is required to keep properly indexed records giving the name, if known, of every person whose death is investigated, the place where the body was found, the date, cause, and manner of death, and all other relevant information concerning the death.

Whenever in his opinion death may have resulted from a criminal act, the coroner is required to deliver a signed copy of his report of investigation or inquest to the county attorney. If the coroner holds an inquest, he is required to file a record of all proceedings had before him in the office of the clerk of the district court of the county. In all cases brought to the attention of the coroner in which he does not deem it necessary to hold an inquest, he is required to file with the clerk of the district court a certificate setting forth the facts in relation to his investigation. Each coroner is required to issue a certificate of death in all cases of violent or mysterious deaths, includings suspected homicides, which occur in his county.

In any county, the county board may elect to be bound by those provisions of law relative to the investigation of deaths by a medical examiner. In such counties, the county board is required to appoint a permanent county medical examiner to serve at the pleasure of the county board, unless there is a person whom the county board deems qualified who will agree to seek election to the office of coroner or who will accept the appointment to such office in counties where the coroner is appointed. Each medical examiner is required to be a licensed doctor of medicine or osteopathy. In such counties, the sheriff is required to investigate and may recommend to the medical examiner and the county attorney the conduct of inquests and autopsies in all of the following human deaths: violent deaths, whether apparently homicidal, suicidal, or accidental, including but not limited to deaths due to criminal abortion, whether apparently self-induced or not; deaths under unusual or mysterious circumstances; deaths of persons whose bodies are to be cremated, buried at sea, or otherwise disposed of so as to be thereafter unavailable for examination; and deaths of inmates of public institutions who are not hospitalized therein for organic disease.

The sheriff is required to deliver a signed copy of his report of investigation to the county attorney and the medical examiner. The medical examiner may conduct an autopsy in any case of such human death when in his judgment the public interest requires an autopsy. However, if the death being investigated is that of a person whose body is to be cremated, dissected, buried at sea or otherwise disposed of so as to be thereafter unavailable for examination, or is that of an inmate of a public institution who is not hospitalized therein for an organic disease, no autopsy may be conducted unless the surviving spouse, or next of kin if there is no surviving spouse, consents thereto, or unless the appropriate district court orders an autopsy. If during any investigation the medical examiner deems it advisable to engage the services of medical specialists, he is required to apply to the probate judge who, upon reasonable cause being shown, may authorize the medical examiner to engage such medical specialists.

Should the county attorney elect to conduct an inquest, he is required to promptly notify the probate judge of the necessity and to make arrangements for an inquest. At such inquest, the probate judge is required to preside and the county attorney is required to conduct such inquest on behalf of the State. Upon conclusion of the inquest, the probate judge is required to find the cause of death and sign and file a death certificate. Should the county attorney elect not to conduct an inquest, the medical examiner is required to find the cause of death and sign and file a death certificate.

The sheriff is required to keep properly indexed records giving the name, if known, of every person whose death is investigated, the place where the body was found, the date, cause and manner of death, and all other relevant information concerning the death. If an inquest is held, the testimony of the inquest and all records of the proceedings had before the probate judge are required to be kept and maintained as a permanent record of the probate court. Each medical examiner or judge of probate is required to issue a certificate of death in all cases of violent or mysterious deaths, including suspected homicides, which occur in his county.

In Hennepin County, the board of county commissioners may by majority vote abolish the office of County Coroner and establish the office of County Medical Examiner. The board of county commissioners is required to appoint a County Medical Examiner for a term of four years from the three highest ranked applicants whose names are submitted to the board by the Medical Examiner Board consisting of three duly licensed physicians. The County Medical Examiner is required to be a doctor of medicine who is a graduate of a medical school recognized by the American Medical Association and a member in good standing in the medical profession. The County Medical Examiner is required to appoint one or more doctors of medicine to serve as deputies and to have the same powers and be subject to the same liabilities as the County Medical Examiner in his absence or inability to act.

The County Medical Examiner is required to investigate all violent deaths, including homicidal, suicidal, and accidental, all deaths due to thermal, chemical, electrical or radiational injury, deaths due to criminal abortion, including those self-induced, all sudden deaths of persons not disabled by recognizable disease, all deaths of persons to be cremated, and all deaths of persons confined in jails or other public institutions except hospitals, sanatoriums, and homes for the aged.

Upon notification of any such death occurring in Hennepin County, the County Medical Examiner or a deputy is required to proceed to and take charge of the body. He is required to make inquiry regarding the cause and manner of death, reduce his findings to writing and promptly file a full report in the office of the County Medical Examiner. Whenever the County Medical Examiner is of the opinion that death may have resulted from a criminal act, and further investigation is deemed advisable, he is required to forward a copy of the report to the county attorney. If the County Medical Examiner deems it advisable and in the public interest that an autopsy be performed upon a body coming under his jurisdiction and control, or if an autopsy is ordered by a district court judge, an autopsy is required to be performed without unnecessary delay.

A detailed description and report of the facts developed by the autopsy and findings of the person performing by such autopsy are required to be promptly made and filed in the office of the County Medical Examiner and when further investigation is deemed advisable, a copy delivered to the county attorney, and to any other official at whose request the autopsy was performed. The County Medical Examiner is required to keep full and complete records in his office, properly indexed giving the name, if known, of every person or body of a deceased person who is the subject of his investigation, the place where the body was found, date and cause of death, and all other available relevant information. The original report of the investigating County Medical Examiner, and the detailed findings of the autopsy, if any, are required to be attached to the record of each case. The County Medical Examiner is required to certify the cause of death according to his best knowledge and belief in all deaths investigated by him.

All records relative to the investigation of deaths are required to be kept in such condition and arrangement as to make them easily accessible for convenient use and may be inspected, examined, abstracted, or copied at reasonable times by any person.[1] Certified copies of such records are required to be furnished upon demand of any person and payment of fees.

Death records and files of the division of vital statistics, the local registrars and clerk of the district court are open to inspection, subject to State law and regulations promulgated by the department of health. The State Registrar, any clerk of district court, or any local registrar is required, upon request, to furnish to any applicant a certified copy of any death certificate or part of any death certificate.

Minnesota has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.[2]

Footnotes: [1] In Hennepin County, all records relative to the investigation of deaths are not available to any person. The policy of the office of the County Medical Examiner in Hennepin County is that autopsy report information is available to all through relatives of the deceased only (other than law enforcement agencies and county attorney).

2 Within Hennepin County since 1964, an elaborate sudden infant death program has been in operation due to the efforts of Dr. John I. Coe, Medical Examiner of Hennepin County, and the local chapter of the National SIDS Foundation.

Citations: Minn. Stat. § 15.17; § 38.201; §§ 144.168, 144.175; §§ 390.005, 390.05, 390.006, 390.11, 390.17, 390.23, 390.32, 390.33, 390.34, 390.35; Ch. 848 (Session Laws 1963).

MISSISSIPPI

Mississippi's death investigation system consists of county coroners and a State medical examiner.

Each county is required to elect a coroner for a term of four years. No person may hold the office of coroner who is not a qualified elector at the time of his election or who denies the existence of a Supreme Being.

If the person who holds the office of coroner is not a doctor of medicine duly licensed by the State of Mississippi, he is required to take inquests of deaths in prison, and of all violent, sudden or casual deaths within his county. As soon as he receives notice of any such death, he is required to have summoned a coroner's jury to inquire into how or in what manner the deceased came to his death unless the deceased was killed in the presence of witnesses, or came to his death by a known accident, and an inquest is not requested by the county prosecuting attorney of the county or district attorney of the district. Upon the taking of any inquest, whenever it is necessary in order to ascertain the cause of death, the coroner, at the written request of a majority of the jurors, may cause a surgeon or physician to appear as a witness.

In any case of doath where it appears that the death may have resulted from criminal means, the coroner, upon written motion of the county prosecuting attorney or the district attorney, is required to order an autopsy performed upon the body of the deceased, by a qualified physician who is to appear as a witness at the inquest. In all cases, findings of the jury, together with the precept and all the proceeding before the coroner, are required to be returned by him to the clerk of the circuit court, to be carefully preserved in his office.

If the person who holds the office of coroner is a doctor of medicine duly licensed by the State of Mississippi, he is required to investigate and determine without the necessity of a jury of inquest, the cause, nature and true circumstances of all sudden, unexplained, violent, unnatural, untimely or suspected homicidal deaths within his county. The coroner may take X-rays of the deceased human being and perform or have performed toxicologic, bacteriologic, or other scientific duties, and perform any and all acts necessary to properly investigate the death. Where the coroner feels that the services of a trained law enforcement officer are required to assist him in an investigation, he may request the sheriff, city police department or highway patrol to provide such service. The coroner may also appoint licensed doctors of medicine to serve as deputies with the authority to do all the acts and duties required to be perfomed by him.

Upon the written order of the county prosecuting attorney, or the district attorney, or upon the filing of a petition signed by six electors of the county, the county coroner or deputy is required to conduct an investigation, or autopsy, as provided above, of the circumstances surrounding any death believed to have occurred in the county. If any autopsy or post mortem examination is deemed necessary, and if there is no objection by the surviving spouse, or if there is no surviving spouse, by any surviving parent, or if there is neither a surviving spouse nor parent, then by any surviving child, the coroner, in his discretion, may order or perform such an examination. The findings and conclusions of the coroner are required to be reduced to a written report and filed with the circuit clerk of the county in a confidential file.

In the event of any death where no physician was in charge of the patient's care for the illness or condition which resulted in death, the coroner may investigate and certify the cause of death. If a coroner's inquest is held, the coroner is required to certify the cause and circumstances of the death and to sign the death certificate.

A circuit judge, chancellor or county judge of the county or district where a person has died or where the body of a deceased person is or where the cause of death occurred, may, in his discretion, order an autopsy to be performed upon the body of any deceased person upon the petition of the appropriate county prosecuting attorney or district attorney. The physician performing an autopsy is required to file a report of the autopsy with the circuit clerk of the county where the death is being investigated.

Upon petition of the executive officer of the Mississippi Board of Health or a county health officer, a circuit judge, chancellor or county judge may also, in his discretion, order an autopsy to be performed upon the body of any deceased person in the interest of public health and welfare in cases where the cause of death is not known and cannot be determined with reasonable certainty without an autopsy and when it would appear to the judge or chancellor by the petition and evidence in support thereof that death may have been due to communicable disease or contagious disease or to poison, foreign substance, radiation or for any other reason exact knowledge as to which would be of benefit to the public health and welfare. The physician performing such an autopsy is required to file a copy of the report with the clerk of the court in which the order was entered, with the county health officer of the county and with the executive officer of the State board of health.

The State medical examiner who is under the supervision of the University of Mississippi Medical Center, is appointed by the Governor with the advice and consent of the Senate from among nominees submitted jointly by the Mississippi State Medical Association and the Mississippi Association of Pathologists. The State medical examiner is required to be a physician who is eligible for a license to practice medicine in Mississippi and to be certified in forensic pathology by the American Board of Pathology. He may employ such additional scientific, technical administrative and clerical assistants as are necessary for performance of his duties.

The State medical examiner is required to investigate or cause to be investigated all of the following human deaths occurring or which might have occurred in the State of Mississippi: violent deaths, whether apparently homicidal, suicidal or accidental, including but not limited to deaths due to thermal, chemical, electrical or radiation injury, and deaths due to criminal abortion, whether apparently self-induced or not; sudden deaths not caused by readily diagnosed and recognizable disease; deaths occurring under suspicious circumstances; deaths of inmates of public institutions who are not hospitalized for organic or mental illness; deaths of prisoners; and deaths related to disease thought to be of a contagious nature or related to a condition which might constitute a threat or hazard to the public health.

If, in the judgment of the medical examiner, it is advisable and in the public interest that a post mortem examination be performed upon the decedents whose deaths occurred under any of the above described circumstances, he or a pathologist designated by him is required to perform such examination. The State medical examiner or his appropriately qualified designee-pathologist is also required to perform an autopsy where such autopsy is requested by a district attorney or circuit judge, and to prepare and furnish to the requesting authority reports of findings. The State medical examiner is required to extend cooperation to law enforcement officials and to the courts of the State of Mississippi, and to assist in the investigation of any death, and perform pathological tests in relation to any death, when requested to do so by any sheriff, circuit judge, chief of police, district attorney, county attorney, coroner, or by any citizen who shows reasonable cause.

Full and complete records, properly indexed, giving the name, if known, of every person whose death is investigated, the place where the body was found or where death occurred, the date, cause and manner of death, and all other relevant information concerning the death are required to be kept by the State medical examiner. In cases investigated by him, the State medical examiner is also required to issue a death certificate.

Access to any confidential file kept by the circuit clerk of the county may be granted only upon written order of the county judge, circuit judge or chancery judge of the county in which the file is located.

Records of deaths on file in the division of public health statistics are accessible to the public at reasonable times and for proper purposes pursuant to rules promulgated by the State board of health. The State Registrar may, in his discretion, upon request and payment of a fee, furnish any applicant a certified copy of the record of any death.

Upon request, law enforcement officials, attorneys, and the courts may receive copies of the State medical examiners records.

Mississippi has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Miss. Code Ann.
Const., Art. 5, § 135;
Const., Art. 12, §§ 250, 265;
§§ 19-21-11, 19-21-27, 19-21-29,
19-21-51, 19-21-57, 19-21-59, 19-21-65.

19-21-67, 19-21-69; §§ 41-37-9, 41-37-13, 41-37-23; § 41-57-7; §§ 41-61-3, 41-61-7, 41-61-9, 41-61-11, 41-61-13, 41-61-15; State Board of Health, Rules and Regulations, Rule # 17.

MISSOURI

Missouri's death investigation system consists of county coroners and county medical examiners.

Each county of the State, except in counties of the second class which prior to January 1, 1975, had a population of more than one hundred twenty thousand and less than two hundred thousand, counties of the first class not having a charter form of government, and those counties which adopt the provisions of law relative to a county medical examiner, is required to elect a coroner for a term of four years. No person may be elected to the office of coroner unless he is a citizen of the United States, over the age of twenty-one years, and has resided within the State one year, and within the county for which he is elected, six months next preceding the election. The coroner, in all counties which contain a city of seventy-five thousand inhabitants and less than two hundred thousand inhabitants, may appoint such number of deputies and assistants as the county court may deem necessary for the prompt and proper discharge of the duties of the coroner's office.

The coroner of the city of St. Louis is authorized to do and perform all acts and exercise all powers within the limits of the city of St. Louis required or authorized by law to be performed by coroners in Missouri. He is required to appoint, in writing, two deputies and a chief clerk who serve during the pleasure of the coroner. In addition to all other duties imposed by law, the coroner of the city of St. Louis is required to certify and file with the State Registrar of vital statistics a death certificate for the death of all persons buried by his office for which the city receives reimbursement for the cost of the burial from the federal government under the provisions of the Federal Security Act.

Every coroner, as soon as he is notified of the dead body of any person being found within his county who is supposed to have come to his death by violence or casualty, is required to have summoned a coroner's jury to inquire, upon a view of the dead body how and by whom the deceased came to his death. Each coroner may issue his summons for witnesses, commanding them to come before him to be examined, and to declare their knowledge concerning the matter in question. The evidence of such witnesses is required to be taken down in writing and the coroner is required to return to the court having criminal jurisdiction of the county the inquisition and written evidence taken by him. The coroner, upon an inquisition found before him of the death of any person by the felony of another, is required to speedily inform one or more magistrates of the proper county, or a judge or justice of a court of record.

In all counties of the second class in which a coroner is required by law, the coroner is required, upon holding an inquest and securing the jury's verdict, to immediately file a record of the proceedings in the office of the prosecuting attorney. In all such counties where investigation by the coroner shows that an inquest is not necessary, the coroner is required to file a written report with the prosecuting attorney setting forth facts and circumstances surrounding the case, together with his conclusions and the action taken.

Every coroner is required to make or cause to be made such tests as are necessary to determine the presence and percentage concentration of alcohol and drugs if feasible, in the blood of any driver or pedestrian within his jurisdiction who dies within four hours of and as a result of an accident involving a motor vehicle. Within five days of the conclusion of such tests, the coroner is required to report the death and circumstances of the accident to the Missouri division of highway safety in writing. If a coroner is unable to determine who was a pedestrian or the driver of the motor vehicle, he may perform the tests required upon any deceased person involved if it appears to him in his judgment that such person was likely to have been the driver or pedestrian. No tests may be performed upon any person under sixteen years of age. If a coroner is unable to determine whether a driver or pedestrian was sixteen years of age or older, he may in his judgment perform or not perform the tests. The contents of the report and results of any test may be used only for statistical purposes which do not reveal the identity of the deceased.

When any person in any city of seven hundred thousand or more inhabitants, or in any county of the first or second class in which a coroner is required by law, dies by criminal violence or following abortion, the coroner is required to be notified of the known facts concerning the time, place, manner, circumstances and cause of death. Immediately upon receipt of such notification, the coroner is required to go to the dead body and take charge of the body. Before moving the body, the coroner is required to notify the appropriate police department, county sheriff, or county highway patrol for the purpose of inspecting the body and the surrounding circumstances, carefully noting the appearance, condition, and position of the body, and recording every fact and circumstance tending to show the cause and manner of death. The coroner is required to make such record part of his report.

If on view of the dead body and after personal inquiry into the cause and manner of death, the coroner considers a further inquiry and examination necessary in the public interest, he is required to have summoned a coroner's jury to inquire how and by whom the deceased came to his death. If on view of the dead body and after personal inquiry into the cause and manner of death, the coroner and police officials have reasonable cause to believe that the death was caused by criminal agency and a further examination is necessary in the public interest, the coroner on his own authority may make or cause to be made an autopsy on the body. The coroner may on his own authority employ the services of a pathologist, chemist, or other expert to aid in the examination of the body or of substances which are supposed to have caused or contributed to death. At the time of the autopsy, the coroner is required to record or cause to be recorded each fact and circumstance tending to show the condition of the body and the cause and manner of death.

Each coroner in any city of seven hundred thousand or more inhabitants, or in any county of the first or second class in which a coroner is required by law, in all deaths supposed to have been caused by violence or in a suspicious or unusual manner or unusual circumstances by the action of chemical, thermal or electrical agents, or following abortion, or from diseases resulting from injury or infection, or suddenly when not disabled by recognizable disease, is required to furnish a death certificate.

In all counties required to elect a coroner, the coroner may not be removed from office during the remainder of the term for which he was elected, but upon the expiration of this term, or upon his resignation, the office of coroner is required to be abolished and a medical examiner appointed. In all other counties, the governing board of the county is required to appoint a medical examiner. Each medical examiner is required to be a physician duly licensed to practice by the State board of healing arts and serves at the pleasure of the governing body of the county. Each county medical examiner may appoint, with the approval of the governing body of the county, assistant county medical examiners to assist him in the performance of his duties. Assistant medical examiners are also required to be physicians duly licensed to practice by the State board of healing arts and may perform all the duties of the county medical examiner during his absence.

Medical examiners or their designated assistants are required to investigate the medical causes of death in those cases when a person dies within their respective counties as a result of violence by homicide, suicide, or accident; thermal, chemical, electrical, or radiation injury; criminal abortion, including those self-induced; disease thought to be of a hazardous and contagious nature or which might constitute a threat to public health; or when any person dies suddenly when in apparent good health, or when unattended by a physician, chiropractor, or an accredited Christian Science practitioner, during the period of thirty-six hours immediately preceding his death; or while in the custody of the law, or while an inmate in a public institution; or in any unusual or suspicious manner.

Upon receiving notice that a death has occurred under any of the above described circumstances, the medical examiner or his designated assistant is required to take charge of the dead body and fully investigate the essential facts concerning the medical causes of death. The medical examiner is required to certify the cause of death in any cases where death occurs without medical attendance or where an attending physician refuses to sign a certificate of death, and may sign a certificate of death in the case of any death. When the cause of death is established by the medical examiner, he is required to file a copy of his findings in his office within thirty days after notification of the death. In cases in which, in the opinion of the medical examiner, an autopsy is necessary, an autopsy is required to be performed by the medical examiner if he is a pathologist or by such competent pathologist as may be authorized and employed by the medical examiner. A detailed description of the findings of the autopsy, and the conclusions drawn from the findings, are required to be filed in the office of the medical examiner.

Each medical examiner is required to

keep full and complete records in his office, properly indexed, giving the name, if known, of each deceased person investigated, the place where the body was found, date and cause of death, and all other available information. The original report of the medical examiner or pathologist and the detailed findings of the autopsy, if any, are required to be attached to the record of each case. The medical examiner is required to promptly deliver to the prosecuting attorney of the county copies of all records relative to every death in which, in the judgment of the medical examiner, further investigation may be deemed advisable. The prosecuting attorney of the county may obtain from the office of the medical examiner copies of these records or other information which he may deem necessary.

The State Registrar is required not to permit the inspection of vital records or issue a certified copy of a death certificate or part of a death certificate unless he is satisfied that the applicant for the record has an interest in the matter recorded and that the information contained in the record is necessary for the determination of personal or property rights, or is for a research project, study, newspaper, radio, television, or other news media reporting. A fee is required for a search of the files which includes a certified copy of the record if found.

All public records on file are subject to inspection by any person during legal office hours and when inspection will not interfere with the orderly performance of duties.

Missouri has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Mo. Rev. Stat. §§ 58.010, 58.020, 58.030, 58.070, 58.160, 58.210, 58.215, 58.260, 58.330, 58.350, 58.370, 58.375, 58.445, 58.447, 58.449, 58.451, 58.455, 58.700, 58.705, 58.710, 58.720, 58.725, 58.740, 58.755; §§ 193.190, 193.240.

MONTANA

Montana has a county coroner death investigation system. Each county elects a coroner for a term of four years. No person is eligible to hold the office of coroner who at the time of his election is not twenty-one years of age, a citizen of the State, and an elector of the county in which the duties of the office are to be exercised, or for which he is elected. Each coroner, with the approval of the county commissioners, may appoint one or more deputy coroners for the faithful and prompt discharge of the duties of his office. Coroners are required to investigate those deaths or stillbirths caused by other than natural causes, or occurring under circumstances such as to afford a reasonable ground to suspect that death is the result of criminal conduct, or when no physician or surgeon, licensed in the State of Montana, will sign the death certificate.

When a coroner is informed that a death or stillbirth has occurred under any of the above described circumstances, he is required to make an investigation into the causes and circumstances surrounding the death. If criminal conduct is suspected, the coroner is required to notify one or more law enforcement agencies having jurisdiction to investigate the case. If in the opinion of the coroner an autopsy is advisable, he may retain a physician or pathologist to perform such autopsy. The county attorney or Attorney General may require the coroner to have an autopsy performed. A full record of the facts found as the result of an autopsy is required to be made on a form provided by the Montana State board of health in duplicate, the coroner retaining one copy and delivering the other to the county attorney.

The coroner is required to summon a coroner's jury and to hold an inquest only if requested to do so by the county attorney of the county in which the death occurred or by the county attorney of the county in which the acts or events causing death occurred. When an inquest is held, the coroner may summon a surgeon or physician to inspect the body and give a professional opinion as to the cause of death. The coroner is required to reduce to writing the testimony of all witnesses examined before the coroner's jury and to file such testimony with the inquisition, in the office of the clerk of the district court of the county. If the death of any person occurs in a jail or penal institution, or from the use of a firearm by a peace officer, except where criminal charges have been or will be filed, the county attorney is required to direct the coroner in holding the inquest. In all cases investigated by the coroner, he is required to certify the cause of death according to his best knowledge and belief.

The county coroner is required to keep an official register, in which he must enter the date of holding all inquests, the cause and circumstances of death, if known, and the name of the deceased, when known, and when not, such description of the deceased as may be sufficient for identification.

All records and other matters in the office of the coroner are at all times, during office hours, open to inspection of any person.

The inspection of vital statistics records is not permitted and copies of death certificates are not issued except when the information is necessary for the determination of personal or property rights and the applicant has a direct and tangible interest in the data recorded.

Montana has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Mont. Rev. Codes Ann. Const., Art. II, § 9; §§ 16-2401, 16-2403, 16-2406, 16-3401, 16-3407, 16-3409; § 59-512; §§ 69-4404, 69-4425; §§ 95-801, 95-802, 95-803, 95-805, 95-808, 95-811, 95-814.

NEBRASKA

Nebraska has a county coroner death investigation system. The county attorney is ex officio county coroner and is required to perform all of the duties enjoined by law upon the county coroner. In each county, a county attorney is elected for a term of four years. The county attorney may delegate to the county sheriff that part of the coroner's duties prescribed by law which relate to viewing dead bodies. Coroners are required to hold an inquest upon the dead bodies of such persons only as are supposed to have died by unlawful means.

When a coroner has notice of the presence in his county of the body of a person who is supposed to have died by unlawful means, he may, at his discretion, have summoned a coroner's jury and hold an inquest upon the dead body to inquire when, how and by what means the deceased came to his death. If the coroner or jury deem it necessary for the purposes of an inquisition to summon any surgeons, the coroner is required to issue a subpoena for those preferred.

In each county, the coroner is required to appoint a coroner's physician, at a salary or schedule of fees or both to be set by the county board, to certify the cause of death in every case of death in such county not certified by an attending physician and to perform or cause to be performed an autopsy when requested by the coroner. In each case investigated by him, the coroner is required to complete and sign, within twenty-four hours after taking charge of the case, that part of the certificate of death entitled medical certificate of death.

The coroner is required to return to the district court the inquisition, the papers connected with the same, and a list of the names of witnesses who testified in the matter.

All citizens of Nebraska, and all other persons interested in the examination of death investigation records, may examine the same, and make memoranda and abstracts therefrom, all free of charge, during the hours that the office of the clerk of the district court is open for the ordinary transaction of business.

A certified copy of the record of any death is required to be supplied to any applicant for any proper purpose by the State Registrar upon payment of a fee.

Nebraska has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Neb. Rev. Stat. §§ 23-1210, 23-1801, 23-1814, 23-1818, 23-1820; § 32-308; §§ 71-605, 71-612; § 84-712.

NEVADA

Nevada has a coroner death investigation system. Except in any county where a county coroner is required to be appointed, every township in Nevada is a coroner's district. In each coroner's district, each justice of the peace who resides within the township is an ex officio coroner and is required to perform all the duties of a coroner within the district. Each justice of the peace as ex officio coroner may appoint a deputy or deputies to transact such official business appertaining to the coroner's office as he may direct. All justices of the peace, acting as coroners, are required to investigate those deaths where a person has been killed, or committed suicide, or has suddenly died under such circumstances as to afford a reasonable ground to suspect that the death was occasioned by unnatural means.

When any justice of the peace, acting as coroner, or his deputy, is informed that a death has occurred within the township where he resides under any of the above described circumstances, he is required to go to the place where the body is and make an investigation, and proceed to hold an inquest to inquire into the cause of death. In all cases where it is apparent that the death has been caused by a criminal act, the justice of the peace, acting as coroner, or his deputy, is required to notify the district attorney and the sheriff of the county where the inquiry is made and the district attorney and sheriff are required to assist in the inquiry. An inquest is required to be held unless the district attorney or district judge certifies that no inquest is required. No inquest need be conducted in any case of death manifestly occasioned by natural cause, suicide, accident or when it is publicly known that the death was caused by a person already in custody.

If an inquest is held, the justice of the peace, acting as coroner, or his deputy, is required to summon a coroner's jury to inquire into the cause of death. The coroner may summon a qualified surgeon or physician to inspect the body or hold a post mortem examination, or a chemist to make an analysis of the stomach or the tissues of the deceased, and give a professional opinion as to the cause of death. The testimony at such inquest is required to be reduced to writing by the justice of the peace, acting as coroner, or as he may direct, and by him, without delay, filed in the office of the clerk of the district court of the county.

In each county, the board of county commissioners have the power and jurisdiction to create by ordinance the office of county coroner, to prescribe his qualifications and duties and to make an appointment to such office. Any coroner so appointed is governed by the ordinances pertaining to the coroner's office which may be enacted by the board of county commissioners and the provisions of law relative to the justices of the peace as ex officio coroners are not applicable.

Any coroner whose duty it is to hold an inquest on the body of any deceased person is required to make the certificate of death stating the name of the disease causing the death, or, if from external causes the means of death, and whether probably accidental, suicidal or homicidal. All certificates of death are required to be filed with the State Registrar of vital statistics.

All coroner's records are required to be open at all times during office hours to inspection by any person and may be fully copied or an abstract or memorandum prepared from such records.

All certificates of death filed with the State Registrar of vital statistics are open for inspection. Howevever, the State Registrar may not issue a certified copy of all or any part of a certificate of death unless he is satisfied that the applicant has a direct and tangible interest in the matter recorded.

The board of county commissioners of any county may provide by ordinance that in all cases where the cause or suspected cause of death is sudden infant death syndrome, the coroner may take possession of the body, exhuming the body if necessary, and authorize the performance of a post mortem examination. Such examination may include an analysis of the stomach, stomach contents, blood, organs, fluid or tissues of the body. The findings resulting from the examination, including the opinions and conclusions of the examining physician, are required to be reduced to writing and included in the coroner's record of death. The coroner is required to file a copy of such report with the State Registrar.

The State Registrar is required to annually publish a report specifying the number of post mortem examinations performed where the cause or suspected cause is sudden infant death syndrome. The report is required to also specify the number of such cases in which the cause of death was determined by the coroner to be sudden infant death syndrome.

Citations: Nev. Rev. Stat. § 239.010; § 244.163; §§ 259.010, 259.020, 259.040, 259.050, 259.090, 259.120; §§ 440.170, 440.420, 440.430, 440.435, 440.437, 440.650.

NEW HAMPSHIRE

New Hampshire has a county medical referee death investigation system, with the power of appointment in the Governor and council. Each medical referee is required to be a licensed physician and is appointed for a five year term. Each medical referee is required to deputize competent physicians to act in any and all cases, whenever from ill health or other cause he cannot attend. The various referees are required to examine the dead body of any person who has supposedly come to his death by violence or unlawful act; in any suspicious, unusual or unnatural manner; when in prison; when unattended by a physician; or suddenly when in apparent health, including those sudden and unexpected deaths of children under three years of age.

Whenever the medical referee receives

notice of a body being found under any of the above described circumstances, he is required to make an accurate and detailed description of its location, position and condition, and of all facts concerning it and its surroundings which will aid in determining the cause and circumstances of death. If the medical referee believes further examination is necessary, he is required to notify the local county attorney and the State Attorney General. Only the county attorney or Attorney General may order that an autopsy be performed. Such autopsy must be made by a pathologist and at the expense of the county in which the body was found.

If the medical referee believes that death resulted in any manner contrary to law, he is required to make a return of death and to file a duly attested copy of the record with the county attorney and the Attorney General. The Attorney General or county attorney may order the medical referee to conduct an inquest and to summon such witnesses as he may direct. The medical referee presiding over the inquest is required to make a written report of his conclusions to the county superior court and to furnish copies of such report to the county attorney and the Attorney General.

A town clerk or the registrar of vital statistics is required to issue to any applicant a certified copy of any record or part of any record in his office relative to any death.

As of August 1, 1975, New Hampshire law requires a medical referee to take possession of the body of a child under three years of age whose death is sudden and unexpected for viewing and autopsy within twenty-four hours after the medical referee has received notice of the death. The expense of autopsy is borne by the county. The medical referee is required to enter the term "sudden infant death syndrome" ("SIDS") on the certificate of death where such term is appropriately descriptive of the circumstances surrounding death, and is required to file a duly attested copy of the record of the case with the Director of the Division of Public Health Services. The Director is required upon receipt of the record to immediately mail a duly attested copy of the summary findings of the case to the parents or legal guardians of the deceased.

Citations: N.H. Rev. Stat. Ann. Const., Pt. 2, Art. 46; § 126:14; §§ 611:1, 611:3, 611:4, 611:5, 611:7, 611:8, 611:9, 611:10, 611:12, 611:15, 611:16, 611:17, 611:19.

NEW JERSEY

New Jersey has a State and county medical examiner death investigation system.

A State Medical Examiner, who is required to be a duly licensed physician, a graduate of a regularly chartered and legally constituted medical school and a qualified forensic pathologist, is required to be appointed by the Governor, with the advice and consent of the Senate, for a term of five years. The State Medical Examiner is responsible for supervising the office of the State Medical Examiner in the Division of Criminal Justice in the State Department of Law and Public Safety.

In each county, the board of chosen freeholders is required to appoint, or join in the appointment of, a county medical examiner for a term of five years. Each county medical examiner is required to be a licensed physician, of recognized ability and good standing in his community, with such training or experience as may be prescribed by standards promulgated by the State Medical Examiner. The county medical examiner may, subject to the approval of the board of chosen freeholders, appoint and prescribe the duties of such deputy or assistant county medical examiners and other personnel required for the proper performance of the duties of his office. All deputy and assistant county medical examiners are required to be licensed physicians and to possess such qualifications as may be determined by the county medical examiner after consultation with the State Medical Examiner.

The various medical examiners are required to investigate all human deaths from the following causes: violent deaths, whether apparently homicidal, suicidal or accidental, including but not limited to death due to thermal, chemical, electrical or radiation injury and deaths due to criminal abortion, whether apparently self-induced or not; deaths not caused by readily recognizable disease, disability or infirmity; deaths under suspicious or unusual circumstances; deaths within twenty-four hours after admission to a hospital or institution; deaths of inmates of prisons; deaths of inmates of institutions maintained in whole or in part at the expense of the State or county, where the inmate was not hospitalized for organic disease; deaths from causes which might constitute a threat to public health; deaths without medical attendance; and deaths related to disease resulting from employment or to accident while employed.

Immediately upon receiving notice that a death has occurred under any of the above described circumstances, the county medical examiner or his deputy or assistant is required to go to and take charge of the dead body. He is required to fully investigate the essential facts concerning the medical causes of death, and, before leaving the premises, to reduce such facts as he deems necessary to writing and file such report in his office. If the cause of death is established beyond a reasonable doubt, the county medical examiner is required to promptly make a full report of his findings to the State Medical Examiner and to the county prosecutor. If, however, in the opinion of the county medical examiner, the State Medical Examiner, an assignment judge of the Superior Court, the county prosecutor or the Attorney General, an autopsy is necessary, an autopsy is required to be performed by the State Medical Examiner or an assistant designated by him, or by the county medical examiner or a deputy or assistant county medical examiner if either has the recognized training or experience in forensic pathology, or by such competent forensic pathologists as may be authorized by the State Medical Examiner.

A detailed description of the findings written during the progress of the autopsy, and the conclusions drawn from such findings is required to be filed in the offices of the State Medical Zxaminer, the county medical examiner, and the county prosecutor. In each case investigated by the county medical examiner, he is required to furnish the necessary data and last sickness particulars to make the death certificate.

The State Medical Examiner and the county medical examiners are required to keep full and complete records in their respective offices, properly indexed, giving the name, if known, of every person whose death is investigated, the place where the body was found, date and cause of death, and all other relevant available information. The original report of the State Medical Examiner, assistant medical examiner, or the county medical examiners, and the detailed findings of the autopsy, if any, are required to be attached to the record of each case. The State Medical Examiner, or in case of his absence or inability, an assistant State Medical Examiner, and the county medical examiners, are required to promptly deliver to the county prosecutor of the county in which the death occurred copies of all records relating to every death in which, in the judgment of such medical examiner, further investigation may be deemed advisable. The county prosecutor may obtain from the office of the State Medical Examiner, or of the county medical examiners, as the case may be, copies of such records or other information which he may deem necessary.

Every citizen of New Jersey, during regular business hours, has the right to inspect all records of the office of the State Medical Examiner, and of the county medical examiners. Copies of such records may be obtained by private persons upon payment of a reasonable fee and such conditions as may be prescribed by the State Medical Examiner, except that no person with a proper interest in such records may be denied access.

Upon request, any person may obtain a certified copy of any death record from the State Registrar.

New Jersey has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: N.J. Rev. Stat. §§ 26:6-8, 26:6-9; § 47:1A-2; §§ 52:17B-79, 52:17B-80, 52:17B-83, 52:17B-84, 52:17B-86, 52:17B-87, 52:17B-88, 52:17B-92.

NEW MEXICO

New Mexico has a Statewide medical investigator system divided into districts which are coexistent with one or more counties.

The board of medical investigations, which consists of the dean of the medical school at the University of New Mexico, the director of the department of hospitals and institutions, and the chief of the State police, is required to employ a qualified State medical investigator and to formulate broad policy for the operation of the offices of the State medical investigators. The State medical investigator is required to be a physician licensed to practice in New Mexico and, in so far as practicable, trained in the fields of pathology and forensic medicine.

The State medical investigator is required to maintain his office at the school of medicine at the University of New Mexico and, subject to approval of the board of medical investigations, promulgate rules and regulations for the proper investigation of deaths occurring within New Mexico. District medical investigators are required to be appointed by the State medical investigator. Each district medical examiner is required to be a licensed physician. The State medical investigator may work under the supervision of a district medical investigator, and when deemed necessary, may direct a deputy or district medical examiner to enter another district to carry out medical investigations. All medical investigators are required to investigate those deaths where a person came to a sudden, violent or untimely death or is found dead and the cause of death is unknown. Funds for the operation of the State and district medical examiner offices are required to be appropriated to and administered by the University of New Mexico School of Medicine.

When the office of the State or any district medical investigator is notified that a death has occurred under any of the above described circumstances, the State or district medical investigator, or a deputy medical investigator under his direction, is required without delay to view and take legal custody of the body. If, after viewing the body, notifying the law enforcement agency with jurisdiction and making an investigation, the State or district medical investigator is satisfied that the death was not caused by criminal act or omission and that there are no suspicious circumstances about the death, he is required to execute a death certificate and a certificate authorizing release of the body for burial.

In those cases in which the investigation is performed by a deputy medical investigator, if, after viewing the body, notifying the law enforcement agency with jurisdiction and making an investigation, he is satisifed that the death was not caused by criminal act or omission and there are no suspicious circumstances about the death, he is required to report this finding to the State or district medical investigator under whose direction he is working. Upon receiving such a report from a deputy medical investigator, the State or district medical investigator may execute a death certificate and a certificate authorizing release of the body for burial.

If the State, district or deputy medical investigator suspects that a death was caused by a criminal act or omission, or if the cause of death is obscure, he is required to order an autopsy performed by a qualified pathologist certified by the State board of medical examiners. The pathologist is required to record every fact found in the examination and to deliver his report to the State, district or deputy medical investigator within a reasonable time. The State, district or deputy medical investigator may take the testimony of the pathologist and any other persons and this testimony, combined with the written report of the pathologist, constitutes an inquest. The State or district medical investigator is required to promptly report his findings, or the findings of a deputy medical investigator that has performed an investigation under his direction, to the district attorney, in each death investigated. Said office is required to send a complete record of the medical investigator in any case, including a transcript of the testimony of witnesses examined at any inquest.

The State medical investigator is required to maintain records of all deaths occurring within New Mexico which are investigated by either State or district medical investigators.

Upon request, the State Registrar is required to issue a certified copy of a certificate of death in his custody to any person who demonstrates a tangible and proper interest.

Public access to all records maintained by the State medical investigator is provided for pursuant to rules promulgated by the board of medical investigations.

New Mexico has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: N.M. Stat. Ann. § 12-4-48; §§ 12-29-1, 12-29-2, 12-29-3; §§ 15-43-44, 15-43-45, 15-43-46, 15-43-47; Handbook for Representatives of the Office of the Medical Investigator, Ch. 11, § 1, ¶ 5.

NEW YORK

New York's death investigation system consists of county coroners and medical examiners.

In each county, except Lewis County, coroners are required to be elected for a term of three years, unless the office of coroner has been abolished. The board of supervisors in any county may, at least one hundred and fifty days before a general election and subject to a permissive referendum, divide the county into not more than four districts bounded by city or town lines and provide for the election of one coroner in each district. In Lewis County the district attorney is required to exercise and perform all the powers and duties of the office of coroner for that county.

In each county where the office of coroner has not been abolished, the board of supervisors may appoint one or more coroner's physicians or may provide by local law for the appointment of one or more coroner's physicians, and may fix the terms of their office. In any county in which the coroner or any of the coroners is not a physician duly licensed to practice in New York, the board of supervisors is required to appoint one or more coroner's physicians. Each coroner's physician by virtue of his office is a deputy coroner during the absence or inability of the coroner to act, or in the event of a vacancy in the office of coroner.

At least one hundred and fifty days before any general election and subject to a permissive referendum, the board of supervisors in any county may abolish the office of coroner and create the office of medical examiner. If the office of coroner is abolished, the board of supervisors is required to appoint a medical examiner to serve at its pleasure. Each medical examiner so appointed is required to be a resident of the county and a physician duly licensed to practice in his profession in the State of New York and a person determined by the board of supervisors as qualified to perform an autopsy and dissect dead bodies of human beings.

The district attorneys of the county of New York and of the county of Kings may appoint and, at pleasure, remove a medical assistant, who is required to be a physician and surgeon, resident of the county in which he is appointed, and duly licensed to practice medicine in New York for at least ten years before his appointment. Each medical assistant is required, under the supervision and direction of the district attorney, to examine into and report on all cases of suspicious, sudden and unusual death and wounding within the county, and to perform such duties as the district attorney may direct in connection with the official duties of his office in the enforcement and administration of the criminal laws. Each medical assistant is also required, whenever so directed by the district attorney, to dissect, perform an autopsy upon, or attend an autopsy upon any dead body of a human being.

Coroners, coroners and coroner's physicians, and medical examiners are required to investigate those deaths of persons dying or whose bodies are found which are or appear to be: a violent death, whether by criminal violence, suicide or casualty; a death caused by unlawful act or criminal neglect; a death occurring in a suspicious, unusual or unexplained manner; a death caused by suspected criminal abortion; a death while unattended by a physician, so far as can be discovered, or where no physician able to certify the cause of death as provided in public health law and in form as prescribed by the commissioner of health can be found; or a death of a person confined in a public institution other than a hospital, infirmary or nursing home.

When a coroner or medical examiner is informed of the occurrence of a death within his jurisdiction under any of the above described circumstances, he is required to go at once to the place where the body is and take charge of it. If the coroner is not a physician duly licensed to practice medicine in New York, he is required at once to notify and designate a coroner's physician to act with him. If no coroner's physician is available, the coroner is required to employ and designate a physician qualified to make, and testify on, post mortem examinations and dissections to act as a coroner's physician for the purpose of the investigation. Each coroner's physician so notified or employed, and designated, is required also to go to the place where the body is, and the coroner and such coroner's physician are required to jointly take charge of the body.

The coroner or the coroner and coroner's physician, or the medical examiner, is required to fully investigate the essential facts concerning the death, and before leaving the premises, to reduce all such facts to writing. In the course of the investigation, the coroner or the coroner and coroner's physician, or the medical examiner, is required to make or cause to be made such examinations, including an autopsy, as in his or their opinion are necessary to establish the cause of death, or to determine the means or manner of death, or to discover facts, the ascertainment of which is requested in writing by a district attorney, or a sheriff, or the chief of a police department of a city or county, or the superintendent of State police, or the commissioner of correction. If the coroner is not a physician duly licensed to practice medicine in New York, the determination whether an autopsy or any subsequent examination or analysis of tissue or organs is necessary is required to be made by the coroner's physician, and any such autopsy, examination or analysis is required to be made by him or at his direction.

Local law of any county may require the written concurrence of the district attorney or the county health officer or the sheriff, or written concurrence of all or any of them, for any determination by a coroner, coroner's physician, or medical examiner, that an autopsy or any subsequent examination or analysis of tissue or organs is necessary. Each coroner, coroner's physician or medical examiner may consult with and request advice, consultation or other assistance from any officer of a department of the State government, from any medical examiner of any city or county, from any other coroner or coroner's physician of any county, or from the head or designated member of the staff of any public health laboratory, police laboratory or State or municipal laboratory, or from any physician qualified to make and to testify on, post mortem examinations: and to request from any such person such tests, examinations or analyses and reports as are necessary in his opinion, with respect to the body of the deceased or with respect to any other matter related to his investigation.

The writing made by the coroner, or by the coroner and coroner's physician, or by the medical examiner, at the place where he takes charge of the body, is required to be filed promptly in the office of the coroner or medical examiner. The testimony of witnesses examined before him and the report of any examination made or directed by him is required to be made in writing or reduced to writing and filed in such office. The report of any autopsy or other examination is required to state every fact and circumstance tending to show the condition of the body and the cause and means of manner of death. A detailed description of the findings, written during the progress of the autopsy, and the conclusions drawn from such findings are required, when completed, to be filed in the office of the coroner or medical examiner.

In case of any death occurring without medical attendance, the coroner or medical examiner whose duty it is to investigate the death is required to execute the certificate of death, stating in such certificate the name of the disease causing the death, or if from external causes, the means of death, whether probably accidental, suicidal or homicidal, and such other information as may be required by law.

The coroner or coroners of each county, or the medical examiner, is required to keep full and complete records, properly indexed, stating the name, if known, of every person whose death is investigated, the place where the body was found, the date of death, if known, and if not known, the date or approximate date as determined by the investigation, the original report of the coroner, or coroner and coroner's physician or physician employed, or medical examiner, and the detailed findings of the autopsy, if any. Such records are required to be kept in the office of the county clerk except in those counties having a full time coroner or medical examiner, in which case the records are required to be kept in the office of the coroner or medical examiner. Such records are required to be open to inspection by the district attorney of the county. The coroner, coroner's physician or medical examiner is required to promptly deliver to the district attorney copies of all records pertaining to any death whenever, in his opinion, or in the judgment of the person performing the autopsy, there is any indication that a crime was committed.

Upon application of personal representatives, spouse or next of kin of the deceased or of any person who is or may be affected in a civil or criminal action by the contents of the record of any investigation, or upon application of any person having a substantial interest in the record, an order may be made by a court of record, or by a justice of the supreme court, that the record of that investigation be made available for his inspection or that a transcript of the record be furnished to him, or both.

Upon request, a certified copy or a certified transcript of the record of any registered death is required to be issued to any applicant unless it does not appear that such record is necessary or required for judicial or other proper purposes.

New York has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: N.Y. County Art. 8, § 400: Art. 24, § 939; Art. 17A, § 673, et seq.; N.Y. Pub. Health Art. 41, §§ 4143, 4174.

NORTH CAROLINA

North Carolina has a county medical examiner death investigation system.

The Secretary of Human Resources is required to appoint for each county in the State one or more medical examiners to serve for terms of three years. Each medical examiner is required to be appointed from a list of two or more licensed doctors of medicine submitted by the component medical society of the county in which the appointment is to be made, or of the district in which the county is located. If no list of names is submitted by the society, the Secretary of Human Resources is required to appoint a medical examiner or medical examiners from a list of licensed medical doctors of the county. If no licensed doctor will accept an appointment as medical examiner in a county, the Secretary of Human Resources may appoint the coroner as acting medical examiner to serve until such time as the vacancy can be filled. If the medical examiner of any county, on account of illness or enforced absence or personal interest is unable to serve in any particular case or for a temporary period of time, the Secretary of Human Resources is then required to designate some other qualified doctor of medicine in the county, or the coroner, to serve in the place of the regular medical examiner in making any examination or report required.

All medical examiners are required to investigate those deaths where the deceased came to his death apparently by criminal act or default, or apparently by suicide, or while an inmate of any penal or correctional institution, or under any suspicious, unusual or unnatural circumstances, or where the death or fetal death occurred without medical attendance. The Secretary of Human Resources is required to furnish to each medical examiner full directions as to the nature, character and extent of the investigation to be made in such cases, together with appropriate forms for the required reports and instructions for their use.

Upon receiving notice that a death has occurred in his jurisdiction under any of the above described circumstances, the medical examiner is required to take charge of the dead body, make inquiries regarding the cause and manner of death, reduce his findings to writing, and promptly make a full report to the Secretary of Human Resources, retaining one copy of the report for his own and delivering copies to the district solicitor of the superior court, and upon request to a defendant in a criminal action, or any party involved in a civil action. If, in the opinion of the Secretary of Human Resources or the medical examiner of the county in which the dead body was found, it is advisable and in the public interest that an autopsy or other pathologic study be made, or if an autopsy or other pathologic study is requested by the superior court, district attorney or by any superior court judge on his own motion or any party, an autopsy or pathologic study is required to be made by the Secretary of Human Resources or by a comptent pathologist designated by him, and a copy of the autopsy report furnished by the district attorney, judge and requesting party. The medical examiner is responsible for medical certification as to the cause of death for each death which he investigates.

In every case requiring the medical examiner to be notified, the coroner is required to be notifed by the medical examiner, and the coroner is required to hold an inquest and preliminary hearing in those instances in which it appears that the deceased probably came to his death by the criminal act or default of some person. The coroner is required to file a written report of his investigation with the medical examiner and the district attorney or the superior court.

All medical examiners' reports are public records and as such may be inspected and examined at reasonable times under supervision by any person, and certified copies of such records obtained on payment of fees as prescribed by law. Certified copies of death records in the custody of the State Registrar may also be obtained by any person on payment of fees as prescribed by law, although no person other than those authorized by the State Registrar is permitted to have access to any original death records.

North Carolina has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: N.C. Gen. Stat. §§ 130-46, 130-59, 130-197, 130-198, 130-199, 130-200, 130-202.2; § 132-6; § 152-7.

NORTH DAKOTA

North Dakota has a county coroner death investigation system.

Each organized county, unless it has adopted one of the optional forms of county government provided by law, is required to have the office of county coroner. Each county coroner is appointed by the board of county commissioners for a term of two years. If such office becomes vacant by death, resignation, expiration of the term of office or otherwise, or when the coroner becomes permanently unable to perform the duties of his office, the county commissioners are required to appoint a physician who has been duly licensed to practice as a physician in North Dakota for a period of not less than two years immediately preceding his appointment as coroner, and who is in good standing in his profession.

If the duly appointed, qualified, and acting coroner is absent temporarily from the county, or when on duty with the armed services of the United States, or the State militia, or with the American Red Cross, or when unable to discharge the duties of his office for any other reason, such coroner may appoint a person with the qualifications of coroner to act in his absence, service or disability.

In counties having a population of less that eight thousand according to the last preceding official federal census, the county coroner is required to investigate the cause of death when death occurs without medical attendance and to hold inquests upon the dead bodies of such person only as he believes to have died within his county by unlawful means. If the county coroner does not deem it necessary to hold an inquest in any case brought to his attention, he is required to file with the clerk of the district court of the county within which the dead body was found a certificate setting forth all the facts in relation to the case. When the county coroner has notice that the dead body of a person supposed to have died by unlawful means has been found in his county, he is required to have summoned a coroner's jury to hold an inquest on the dead body. If, upon inquest, the county coroner or the jury deems it necessary, the coroner may summon one or more physicians or surgeons to make a scientific examination of the body. The county coroner is required to file the testimony of all witnesses examined before the coroner's jury, together with a record of all proceedings had before him, in the office of the clerk of the district court of the county within which the inquest was held. The clerk of the district court is required to file, index, and enter in a book kept for that purpose the proceedings of the coroner. The county coroner is required to complete and sign the medical certification on the death certificate in all cases investigated by him.

In counties having a population of eight thousand or more according to the last preceding official federal census, the county coroner is required to investigate those deaths which occur without medical attendance or where a person has died as a result of criminal or violent means, casualty, suicide, accidental death, or died suddenly when in apparent good health in a suspicious or unusual manner. In such counties, the county coroner is required to be a physician who has been duly licensed to practice as a physician in North Dakota and who is in good standing in his profession. Each county coroner may appoint an assistant coroner or coroners who are licensed physicians of good standing in their profession or pathologists to assist in doing autopsies and making such pathological and chemical examinations, and performing such other duties as may be directed by the county coroner or recommended by the State's attorney. In any county in which no physician resides, the duties of the county coroner are required to be performed by the sheriff, who is required to call upon the nearest physician, coroner, or deputy coroner, or if none is available, the closest practicing physician, to investigate the medical cause of death of all coroner cases within the county.

Any person who discovers the dead body, or acquires the first knowledge of the death of any person occurring under any of the above described circumstances, is required to notify the office of coroner or any law enforcement officer of the known facts concerning the time, place, manner and circumstances of death, and any other information required by law. If he deems it necessary, the coroner or his medical deputy may take custody of the dead body for the purpose of autopsy. When the coroner does not deem an autopsy necessary, the sheriff and State's attorney may direct an autopsy to be performed by the coroner or his deputy coroner, or pathologist.

In all cases coming under his jurisdiction, each county coroner is required to keep full and complete records and to fill in the cause of death upon the death certificate. All records, properly indexed, stating the name, if known, of every deceased person whose death is investigated, the place where the body was found, date of death, cause of death, and all other available information, are required to be kept in the office of the coroner, or if no such office is maintained, in the office of the clerk of the district court of the county. The report of the coroner, and the detailed findings of the autopsy, if any was performed, are required to be attached to the report of each case. The coroner is required to promptly deliver to the State's attorney of the county in which such death occurred, copies of all necessary records relating to every death in which, in the judgment of the coroner or State's attorney, further investigation may be deemed advisable. The sheriff of the county, the police of the municipality, or the State highway patrolman on duty in that county, or the constable, or marshall of the township or village in which the death occurred, may be requested to furnish more information or make further investigation when requested by the coroner or his deputy. The State's attorney may obtain from the office of the coroner, copies of records and such other information as he may deem necessary for further investigation.

Coroners' records are the property of their respective counties and are considered public records, open and accessible for inspection during reasonable office hours.

Death certificates may not be inspected, nor may any information contained in any death certificate be disclosed or copied except as authorized by regulations promulgated by the State department of health. Current regulations provide that the State Registrar or local registrar may not permit the inspection of or disclose information contained in a death certificate, or copy or issue a copy of all or any part of a death certificate unless he is satisfied that the applicant has a direct and tangible interest in such certificate.

A bill, SB 2101, has passed the legislature in the 1977 session and provides for the autopsying of infant deaths, at State expense, upon request of the parents, and for an educational and informational program regarding the sudden infant death syndrome.

Citations: N.D. Cent. Code §§ 11-19A-02, et seq.; §§ 11-19-02, et. seq.; § 44-04-18; Rules and Regulations of the State Registrar of Vital Statistics §§ 23-02.1-19, 23-02.1-27.

OHIO

Ohio has a county coroner death investigation system. In each county, a coroner is elected for a term of four years. No person is eligible to the office of coroner except a physician who has been licensed to practice as a physician in Ohio for a period of at least two years immediately preceding his election as a coroner, and who is in good standing in his profession. Each coroner may appoint assistant coroners who are licensed physicians of good standing in their profession, one of whom may be designated as the chief deputy coroner. Each coroner may also appoint pathologists as assistant coroners to assist in doing autopsies, make pathological and chemical examinations, and perform such other duties as are directed by the coroner or recommended by the prosecuting attorney. All coroners are required to investigate those deaths where a person dies as a result of criminal or other violent means, or by casualty, or by suicide, or suddenly when in apparent health, or in any suspicious or unusual manner.

Whenever the office of the coroner is notified that a death has occurred under any of the above described circumstances, the coroner or deputy coroner may go to the dead body and take charge of it. If, in the opinion of the coroner, or, in his absence, in the opinion of the deputy, an autopsy is necessary, an autopsy is required to be performed by the coroner, deputy coroner, or pathologists. A detailed description of the observations written during the progress of an autopsy, or as soon after an autopsy as reasonably possible, and the conclusions drawn from the autopsy are required to be filed in the office of the coroner. The sheriff of the county, the police of the city, the constable of the township, or marshal of the village in which the death occurred may be required to furnish more information or make further investigation when requested by the coroner or his deputy. In all cases coming under his jurisdiction, the coroner is required to fill in the cause of death on the death certificate.

Each coroner is required to keep complete records of each death investigated, stating the name, if known, or the deceased person, the place where the body was found, date of death, cause of death, and all other available information. The report of the coroner and the detailed findings of the autopsy are required to be attached to the report of each case. The coroner is required to promptly deliver to the prosecuting attorney of the county in which the death occurred, copies of all necessary records relating to every death in which, in the judgment of the coroner or prosecuting attorney, further investigation is advisable. The prosecuting attorney may obtain copies of records and such other information as is necessary from the office of the coroner.

All records of the coroner are the property of the county and are required to be open to inspection by the public. Any person may receive a copy of any record or part of such record upon demand in writing and payment of a fee.

Any person may obtain a certified copy of any death record from the department of health upon payment of a fee.

Ohio has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Ohio Rev. Code Ann. §§ 313.01, 313.02, 313.05, 313.09, 313.10, 313.12, 313.13; § 3705.05.

OKLAHOMA

Oklahoma has a medical examiner death investigation system under the control and supervision of the Board of Medicolegal Investigations. The Board of Medicolegal Investigations, which consists of the Director of the State Bureau of Investigation, the State Commissioner of Health, the Dean of the College of Medicine of the University of Oklahoma, the President of the Oklahoma Bar Association, the President of the Oklahoma Osteopathic Association and the President of the Oklahoma State Medical Association, or their respective designees, is required to appoint a Chief Medical Examiner for such term as the Board may fix to direct the office of the Chief Medical Examiner.

The Chief Medical Examiner is required to be a citizen of the United States, a physician licensed to practice in Oklahoma and a diplomate of the American Board of Pathology in forensic pathology. The Chief Medical Examiner may employ such other staff members as the Board of Medicolegal Investigations may specify and to whom the Chief Medical Examiner may delegate specific duties subject to such rules as the Board may prescribe. For each county of the State, the Chief Medical Examiner is required to appoint medical examiners.

Each medical examiner so appointed is required to be a Doctor of Medicine or Osteopathy and Surgery and to hold a valid license to practice his profession in Oklahoma. If there is no qualified person in any county, or no person willing to serve as a medical examiner, of if the medical examiner is absent from the county in which he serves, or is ill or disqualified by personal interest, the Chief Medical Examiner may appoint as a medical examiner for the county a qualified person from another county, or may direct a medical examiner from another county to perform the duties of a medical examiner in both counties.

The various medical examiners are required to investigate all of the following human deaths: violent deaths, whether apparently homicidal, suicidal, or accidental, including but not limited to, deaths due to thermal, chemical, electrical or radiational injury, and deaths due to criminal abortion, whether apparently self-induced or not; deaths under suspicious, unusual or unnatural circumstances; deaths related to disease which might constitute a threat to public health; deaths unattended by a licensed medical or osteopathic physician for a fatal or potentially-fatal illness; deaths of persons after unexplained coma; deaths that are medically unexpected and that occur in the course of a therapeutic procedure; deaths of an inmate occurring in any place of penal incarceration; and deaths of persons whose bodies are to be cremated, buried at sea, transported out of the State, or otherwise made ultimately unavailable for pathological study.

Upon receiving notice that a death has occurred under any of the above described circumstances, the medical examiner is required to immediately conduct an investigation. The medical examiner is required to comply, in detail, with the instructions of the Chief Medical Examiner relative to the nature, character, and extent of investigation and examination to be made in each case in which investigation is required by law. Upon completing his investigation, the medical examiner is required to reduce his findings to writing upon the form supplied to him by the Chief Medical Examiner and to promptly send such report to the Chief Medical Examiner by mail. The Chief Medical Examiner is required to furnish copies of all reports to investigating agencies having official interest in their content.

The Chief Medical Examiner or his designee may, in his discretion, conduct any investigation required by law, or relieve the medical examiner at any stage of an investigation, after which the medical examiner will be responsible only for such specific duties as the Chief Medical Examiner or his designee may assign.

When necessary in connection with an investigation to determine the cause or manner of death and when the public interest requires it, the Chief Medical Examiner, his designee, a medical examiner or a district attorney is required to authorize that an autopsy be conducted. In determining whether the public interest requires an autopsy, the medical examiner or district attorney involved is required to take into account but is not bound by a request from private persons or from other public officials that an autopsy be conducted. When properly authorized, the Chief Medical Examiner or such person as he may designate is required to perform an autopsy. The next of kin of the deceased, or any one of them if more than one, may designate a physician to be present when the autopsy is conducted. A full and complete report of the facts developed by the autopsy together with the findings of the person making it are required to be prepared and filed in the office of the Chief Medical Examiner. Copies of such reports and findings are required to be furnished to district attorneys and law enforcement officers making a criminal investigation in connection with the death.

In those deaths which require an investigation, the Chief Medical Examiner, his designee, or the medical examiner who conducts the investigation is required to make the certificate of death upon a medical examiner death certificate provided by the State Registrar of Vital Statistics. Copies of all such certificates are required to be forwarded immediately upon receipt by the State Registrar of Vital Statistics to the office of the Chief Medical Examiner.

The office of the Chief Medical Examiner is required to keep full and complete records, properly indexed, giving the name, if known, of every person whose death is investigated, the place where the body was found, the date, cause and manner of death, and all other relevant information concerning the death. The full report and detailed findings of the autopsy, if any, are required to be a part of the record in each case. The office of the Chief Medical Examiner is required to promptly deliver to the district attorney of each county having criminal jurisdiction over the case copies of all records relating to every death as to which further investigation may be advisable. Any district attorney or other law enforcement official may upon request secure copies of such records or other information deemed necessary by him to the performance of his official duties.

Certified copies of reports of any investigation by a medical examiner, and laboratory reports and autopsy reports, if any, may be furnished to the next of kin or others having need for them upon written statement and payment of a reasonable fee set by the Board of Medicolegal Investigations.

The Chief Medical Examiner, his designee, or a county medical examiner shall make out the death certificate in subject deaths, and copies shall be kept in the office of the Chief Medical Examiner.

Oklahoma has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Okla. Stat. Tit. 63, §§ 931, 933, 934, 935, 937, 938, 939, 941, 942, 943, 944, 945, 947, 949.

OREGON

Oregon has a medical examiner death investigation system.

The State Medical Examiner Advisory Board, which consists of the Chairman of the Department of Anatomic Pathology at the University of Oregon Medical School, the Superintendent of the State Police, a sheriff, a physician licensed by the Board of Medical Examiners for the State of Oregon, a pathologist, a district attorney, and a funeral director and embalmer licensed by the State Board of Funeral Directors and Embalmers, is required to recommend the name or names of pathologists to the Administrator of the Health Division from which the administrator is required to appoint the State Medical Examiner. The State Medical Examiner Advisory Board is required to also recommend to the Executive Department the qualifications and compensation for the position of State Medical Examiner and Deputy State Medical Examiner.

The office of the State Medical Examiner is responsible for directing and supporting Oregon's death investigation program. The State Medical Examiner, after consultation with the State Medical Examiner Advisory Board, appoints Deputy State Medical Examiners. The State Medical Examiner may designate a Deputy State Medical Examiner as Acting State Medical Examiner.

In each county or district, the State Medical Examiner appoints with the approval of the appropriate board of commissioners, a district medical examiner to investigate and certify the cause and manner of deaths requiring investigation. When a county or district has a population of 200,000 or more persons, the State Medical Examiner may, with the approval of the State Medical Examiner Advisory Board, appoint a Deputy State Medical Examiner for that county or district. Each district medical examiner is required to appoint, subject to the approval of the district attorney and applicable civil service regulations, qualified deputy medical examiners, including the sheriff or a deputy sheriff and a member of the Oregon State Police for each county, to investigate deaths subject to the control and direction of the district medical examiner or the district attorney. Such deputy medical examiners may not authorize embalming, order a post mortem examination or autopsy, or certify the cause and manner of death. In addition, each district medical examiner may appoint one or more assistant district medical examiners, in accordance with qualifications prescribed by the State Medical Examiner Advisory Board, to assist the district medical examiner in investigating and certifying deaths. The district medical examiner is required to supervise the assistant district medical examiners and deputy medical examiners in cooperation with the district attorney and to regularly conduct administrative training programs for the assistant district medical examiners, deputy medical examiners and law enforcement agencies.

The State Medical Examiner is required to assist and advise district medical examiners in the performance of their duties, and to regularly conduct training programs for the district medical examiners and law enforcement agencies. When requested by a medical examiner or district attorney, the State Medical Examiner is required to perform autopsies, if in his judgment an autopsy is necessary in any death requiring investigation. The State Medical Examiner may assume control of any death investigation in cooperation with the district attorney, and may order an autopsy or certify the cause and manner of any death requiring investigation.[1]

The various medical examiners who are physicians are required to investigate and certify the cause and manner of all human deaths: apparently homicidal, suicidal or occurring under suspicious or unknown circumstances; resulting from the unlawful use of dangerous or narcotic drugs or the use or abuse of chemicals or toxic agents; occurring while incarcerated in any jail, correction facility or in police custody; apparently accidental or following an injury; by disease, injury or toxic agent during or arising from employment; while not under the care of a physician during the period immediately previous to death; or related to disease which might constitute a threat to public health.

When a medical examiner or deputy medical examiner is notified that a death has occurred under any of the above described circumstances, he is required to take custody or exercise control over the dead body and notify the appropriate district attorney. All death investigations are under the direction of the district attorney for the county where the death occurs. In any death requiring investigation, a medical examiner or district attorney may order an autopsy performed. If an autopsy is ordered, the medical examiner is required to obtain the services of an authorized pathologist. The medical examiner is required to certify the manner and cause of all deaths which he investigates or which occur without medical attendance. Within five days after notification of a death requiring investigation, the medical examiner is required to make a written report of the investigation and file it in the district medical examiner's office.

An inquest may be ordered by the district attorney for the county where the death occurred to obtain a jury finding of the cause and manner of death. The record of inquest is required to be filed in the district medical examiner's office for the county where the inquest was held. A copy of the order of inquest and verdict of the jury is required to be filed in the State Medical Examiner's office. Each district medical examiner is required to maintain copies of the reports of death investigation by the medical examiner, autopsy reports, laboratory analysis reports, and inventories of money or property of the deceased taken into custody during the investigation. Copies of reports of death investigations by medical examiners and autopsy reports are required to be forwarded to the State Medical Examiner's office. The State Medical Examiner's office is required to file and maintain appropriate reports on all deaths requiring investigation.

Any parent, spouse, child, or personal representative of the deceased, or any person who may be criminally or civilly liable for the death, or their authorized representatives respectively, may examine and obtain copies of any medical examiner's report, autopsy report or laboratory test report ordered by a medical examiner.

All death records in the custody of any registrar are open to inspection by persons who have a direct and proper interest in the record. Any person who has a direct and proper interest in a particular death certificate may obtain a certified copy of such on request and payment of a fee.

Oregon has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Footnote: [1] The State Medical Examiner also may order a body exhumed in any death requiring investigation and may, after a reasonable and thorough investigation, complete and file a death certificate for any person whose body is not found.

Citations: Ore. Rev. Stat. §§ 146.015, et. seq.; § 436.120.

PENNSYLVANIA

Pennsylvania has a county coroner death investigation system.[1]

In each county, a coroner is required to be elected by the qualified electors of the county for a term of four years. Each coroner may appoint one or more deputies to act in his place as he may deem proper and necessary. Each deputy or deputies so appointed have the same powers as the coroner. Coroners are required to investigate those deaths which appear to have happened within their respective counties to determine whether or not there is any reason sufficient to believe that the death may have resulted from criminal acts or criminal neglect of persons other than the deceased rather than from natural causes or by suicide as follows: any sudden, violent or suspicious death; any death in which no cause of death is properly certified by a duly authorized person; any death resulting from drownings, cave-ins and subsidences; any stillbirth, or the death of any baby dying within twenty-four hours after its birth; and the death of any prematurely born infant in which the cause of death is not properly certified by a duly authorized person.

Whenever a coroner receives notice that a death appears to have occurred within his county under any of the above described circumstances, he is required upon having a view of the body to investigate the facts and circumstances concerning the death for the purpose of determining whether or not an inquest should be conducted. In all cases where the coroner has jurisdiction to investigate the facts and circumstances of death, the body and its surroundings are required to be left untouched until the coroner has had a view of the body and until he otherwise directs or authorizes except as may be otherwise provided by law, or as the circumstances may require. If, upon the investigation by the coroner, he is not yet satisifed that the death resulted from natural causes, or by suicide, he is required to proceed to conduct an inquest upon a view of the body.

In the conduct of an inquest, the coroner may require such an autopsy as may be necessary in accordance with the law. At the inquest, the coroner is required to ascertain the cause of death and whether any person other than the deceased was criminally responsible for the death by act or neglect, and, if so, the identity of the person and any further evidence and witnesses regarding the crime. The coroner may, in his discretion, admit or exclude members of the public or any person from any inquest, or part thereof. The proceedings at the inquest are required to be recorded, at the expense of the county, in a manner to be provided by the county commissioners. The coroner is required to issue a certificate of cause of death in all cases referred to him by the local registrant of vital statistics and in all other cases of which he has jurisdiction, if no person duly authorized by law certifies the cause of death.

Each coroner, within thirty days after the end of each year, is required to deposit all of his official records and papers for the preceding year in the office of the prothonotary.

All official records and papers of each coroner are required to be deposited in the office of the prothonotary for the inspection of all interested persons.

Certified copies or disclosure of any vital statistics record or part of such records may be obtained under regulations of the advisory health board by any applicant who is found to have a direct interest in the content of the record when it is found that the information contained in the record is necessary for the determination of personal or property rights.

Pennsylvania has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Footnote: [1] The city and county of Philadelphia has a home rule charter and has a medical examiner appointed under civil service. A few other counties have also opted for a home rule charter and some of them will no longer be electing a coroner. (Home rule charters are optional under a recent change in the State Constitution.)

Citations: Pa. Stat. Ann. Const., Art. 9, § 4, Tit. 16, § 401; §§ 1231, 1237, 1238, 1240, 1244, 1248, 1251; §§ 4231, 4236, 4237, 4239, 4242, 4246; §§ 7534, 7535; § 9251; Tit. 35, §§ 450.503, 450.801, 450.804.

RHODE ISLAND

Rhode Island has a medical examiner death investigation system.

A chief medical examiner is required to be appointed by the Governor with the advice and consent of the State medical commission. The chief medical examiner is required to be a licensed physician and a qualified pathologist, certified in anatomical pathology by the American Board of Pathology and required to have had forensic training or experience. The chief medical examiner is responsible for the supervision of the office of State medical examiner which has the authority to make post mortem examinations, to undertake inquests, and to perform autopsies where there may be in its judgment a reasonable belief that the manner of death is: death by a homicide, suicide, or casualty; death due to criminal abortion; death due to an accident involving lack of due care on the part of a person other than the deceased; death which is the immediate or remote consequences of any physical injury incurred while the deceased person was employed; death due to the use of addictive or unidentifiable chemical agent; or death due to an infectious agent capable of spreading an epidemic within the State.

The chief medical examiner is required to appoint, with the approval of the director of health, such assistant medical examiners and to hire such other staff as may be necessary to carry out the duties of the office of State medical examiners. Each assistant medical examiner so appointed is required to be a duly licensed doctor of medicine or osteopathy. The chief medical examiner is required to recommend to the State medical commission such rules and regulations as he may deem necessary to effectuate the duties of the office of State medical examiners.

When the office of State medical examiners has been notified that there has been found or is lying within Rhode Island the body of a person who has died in any manner to suggest the possibility of a criminal act or as the result of violence or apparent suicide, or from a criminal abortion, or in any suspicious, unusual, or unnatural manner, or when unattended by a physician, or as the apparent result of the negligence of another person, or as the consequence of any physical or toxic injury incurred while employed, or from the use of any addictive or unidentifiable chemical agent, or from an infectious agent capable of spreading an epidemic, or while a prisoner committed by law to the custody of the department of corrections or in the department of mental health, retardation and hospitals, or while in the custody of the State Police or local police departments, an agent of the office of State medical examiners is required to immediately go to and take charge of the dead body. He is required to view the body and to make personal inquiry into the cause and manner of death. If the agent of the office of State medical examiners is of the opinion that the death was caused by an act of neglect of some person other than the deceased, he is required at once to notify the Attorney General and the police of the city or town where the body was found, or in which it lies.

An autopsy may be performed, when appropriate, by the office of State medical examiners for deaths which in its judgment might reasonably be expected to have occurred under any of the above described circumstances. When requested by the Attorney General, the office of State medical examiners is required to conduct an official inquiry before a medical examiner or medical examiners jury or both, to determine the manner of death. In any case in which death occurs without medical attendance or which requires the office of State medical examiners to investigate, the medical examiner who investigates the cause of death is required to complete and sign the death certificate.

The office of the State medical examiner is required to keep complete records, including names, places, circumstances, and causes of deaths, of deaths investigated and reported, copies of which are required to be delivered to the Attorney General. All written determinations of causes of death which are delivered by the office of State medical examiners to the Attorney General are required to be made available for public inspection. Upon written request delivered to the Attorney General, any person who is arrested and charged with causing a death by an act of neglect is entitled to receive a copy of the death record of the autopsy.

Inspection and certified copies of certificates of death are permitted under regulations promulgated by the Rhode Island Department of Health.

Rhode Island has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: R.I. Gen. Laws Ann. §§ 23-4-1, 23-4-3, 23-4-4, 23-4-5, 23-4-7, 23-4-8; §§ 23-3-16, 23-3-23, 23-3-25.

SOUTH CAROLINA

South Carolina has a county coroner and medical examiner death investigation system.

A coroner is elected in each county by the qualified electors for a term of four years. The coroner of each county, except Charleston County, may appoint one or more deputies, with the approval of the judge of the circuit court or any circuit judge presiding in the county, to perform any and all of the duties appertaining to the office of coroner. In any case when the coroner of any county is sick or absent, or at a greater distance than fifteen miles from the place of inquiry, or when the office is vacant, any magistrate of the county may exercise all the powers and duties of the coroner in holding inquests over the bodies of the deceased persons.

In Charleston County, the coroner is required to appoint one deputy to reside at the county seat and perform all the services of the coroner. The coroner may appoint a special deputy coroner whenever any special occasion may require such appointment. In the absence of the coroner, each magistrate residing outside of the limits of the city of Charleston and appointed for the county of Charleston outside the city limits is required to hold such inquests as may be necessary and do such other business as pertains to the office of coroner in cases arising within their respective vicinities.

Whenever a body is found dead in his county and an investigation or inquest is deemed advisable, the coroner or the magistrate acting as coroner is required to go to the body, examine the witnesses most likely to be able to explain the cause of death, and take their testimony in writing. The coroner of any county in which a body is found dead, or the solicitor of the judicial circuit in which such county lies, may order an autopsy or post mortem examination to be conducted to ascertain the cause of death. If the coroner or magistrate acting as coroner determines that the death is casual or violent, or that there ought to be a trial or that blame probably attaches to any living person for the death, he is required, upon written request of two reputable citizens residing in the neighborhood where the dead body was found, to summon a jury and to hold a formal inquest as required by law. Coroners who are paid salaries, except in the counties of Bamberg, Florence and Dorchester, are not required to receive a written request before holding an inquest over any dead body. The coroner may summon any physician to perform a post mortem examination or autopsy, or to testify at an inquest. If the coroner or the magistrate acting as coroner determines that there is no apparent or probable blame against living persons as to the death, he is required to issue a burial permit and all further inquiry or formal inquest is to be dispensed with. The evidence and the finding of the officer on such preliminary examination is required to be filed in the clerk's office of the county, the finding to be that the deceased came to his death from natural cause, at his own hand, from an act of God, or from mischance, without blame on the part of another person.

If an inquest is held, the original inquisition and evidence, as taken by the coroner, is required to be returned by the coroner to the clerk of the court of general sessions for the county in which it was found. Each coroner is required to keep a book called "The Coroner's Book of Inquisitions" into which he is required to copy all inquests found within his county, together with evidence taken before the jury and all proceedings had before or after their findings.

In Greenville and Charleston counties,[1] a five member medical examiner commission has been created in each county to employ a skilled physician or pathologist as county medical examiner for the purpose of performing post mortem examinations, autopsies, and the examination of other forms of evidence as required by law. Each county medical examiner is required with the approval of his county's medical examiner commission to employ such assistants as are necessary to assist him in performing his duties. In addition, each county medical examiner may employ with the approval of his county's medical examiner commission qualified physicians to serve as deputy medical examiners and to carry out the instructions of the county medical examiner and to act in his absence or disqualification. The various medical examiners are required to investigate those deaths where any person dies as a result of violence, apparent suicide, when in apparent good health, unattended by a physician, or in any suspicious or unusual manner, or while an inmate of a penal or correctional institution, or stillbirths not attended by a physician.

When a medical examiner or deputy medical examiner is notified that a death has occurred under any of the above described circumstances, he is required to immediately inquire into the cause and manner of death and to reduce his findings to writing retaining one copy for his files and forwarding one copy to the coroner. In the case of violent death, one copy is also required to be forwarded to the county solicitor of the county in which the death occurred. A coroner's jury may not be impaneled until the investigation is completed and copies of the reports of the county medical examiner and peace officer in charge are received by the coroner. In any death requiring investigation, the county medical examiner or any deputy medical examiner may order an autopsy to be performed. Within twenty-four hours after being notified of any death, the county medical examiner or his deputy is required, in any case investigated, to complete and sign the medical certification portion of the death certificate.

The "Coroner's Book of Inquisitions" is public property and is required to be open to inspection and copying during the regular business hours.

In Greenville and Charleston Counties, the office of the county medical examiner is required to keep complete indexed records of all deaths investigated, containing all relevant information concerning the death, and the autopsy report if made. Any prosecuting attorney or law enforcement officer may secure copies of such records or information necessary to him for the performance of his official duties. Copies of such records or information are required to be furnished upon request to any party to whom the cause of death is a material issue.

The State Registrar or the county registrar is required to disclose information contained in vital records only when he is satisfied that the applicant for such records has a direct and tangible interest in the content of the record and that the information contained in the record is necessary for the determination or protection of a personal or property right.

South Carolina has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Footnote: [1] S.C. Code Ann. § 17-162 reads as follows: "There is hereby created in all counties of the State having a population of two hundred forty thousand or more . . . a commission to be known as the medical examiner commission of that county . . . The creation of a medical examiner commission provided for herein shall not be effective until the county governing body shall enact an appropriate implementing resolution therefor."

Citations: S.C. Code Ann. Const., Art. 5, § 30; §§ 17-51, 17-52, 17-56, 17-59, 17-61, 17-72, 17-79, 17-90, 17-91, 17-92, 17-94, 17-95, 17-96, 17-126, 17-128; § 1-20.2.

SOUTH DAKOTA

South Dakota has a county coroner death investigation system.

A coroner is required to be elected in each county. When there is no coroner, or in case of his absence or inability to act, any magistrate may perform the duties of the coroner in relation to dead bodies. Coroners are required to hold an inquest upon the dead bodies of such persons only as are supposed to have died by unlawful means.

When a coroner is notified that the dead body of a person who is supposed to have died by unlawful means has been found or is in his county, he is required to have summoned a jury to inquire when, how, and by what means the deceased came to his death. In any such inquisition by a coroner, when he or the jury deem it requisite, he may summon one or more physicians or surgeons to make an examination. Whenever a State's attorney or a coroner determines that a deceased person may have died by unlawful means, he may order and direct a physician or surgeon to perform an autopsy. If the coroner is a physician or surgeon, he may personally perform such autopsy.

The coroner is required to return to the circuit court the inquisition, the written evidence, and a list of the witnesses who testified to material matters. The coroner is also required to transmit promptly to the director of the bureau of criminal statistics reports and information, as required by the director, regarding autopsies performed and inquests conducted, together with the verdict of the coroner's jury.

In the case of any death which occurs without the attendance of a licensed physician, the funeral director or other person in charge of the body is required to notify the county coroner of the death and when so notified the county coroner is required to make the medical certificate and return from the statement of relatives or other persons having adequate knowledge of the facts. In the absence of a coroner or deputy coroner, or if the coroner is unable to act, the local registrar is required to prepare the death certificate from the statement of relatives or other persons having knowledge of the facts. If the county coroner has reason to believe that the death may have been due to other than natural causes, he is required to then refer the case to the State's attorney, sheriff, or police for further investigation.

Upon request and payment of a fee, any

applicant is required to be supplied a certified copy of the records of any death. Access to the files and records of the bureau of criminal statistics is not permitted except to the Governor, persons specifically authorized by the director and by order of the court.

South Dakota has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: S.D. Comp. Laws Ann. § 12-2-2; §§ 23-6-14, 23-6-17; §§ 23-13-8, 23-13-9; §§ 23-14-1, 23-14-2, 23-14-3, 23-14-6, 23-14-9; §§ 34-25-21, 34-25-22, 34-25-52.

TENNESSEE

Tennessee's death investigation system consists of county coroners and medical examiners.

The commissioner of public health, acting for the State and with the approval of the Governor, is required to appoint a chief medical examiner to direct the post mortem examination division in the department of public health and such other personnel as he may find appropriate to the enforcement of the duties and powers relative to post mortem examinations. The chief medical examiner is required to be a physician with an unlimited license to practice medicine and surgery in Tennessee, or eligible for and required to obtain such license within six months after employment. The chief medical examiner is also preferably required to be a pathologist certified by the American Board of Pathology, or be eligible for such certification, and to have a special interest or training in forensic medicine.

Except in counties having a population of not less than three thousand nor more than five hundred thousand by any federal census, a county medical examiner is required to be elected by the quarterly county court of the county. Each county medical examiner is required to be a physician who is either a graduate of an accredited medical school authorized to confer upon graduates the Doctor of Medicine degree and duly licensed in Tennessee, or a graduate of a recognized osteopathic college authorized to confer the degree of Doctor of Osteopathy and licensed to practice osteopathic medicine in Tennessee. Each county medical examiner is required to be elected from a list of a maximum of two doctors of medicine or osteopathy nominated by convention of the physicians resident in the county. If it is not possible to obtain an acceptance as a county medical examiner from a physician in a county, a county medical examiner may be elected from an adjacent or another county. A county medical examiner, when temporarily unable to perform his duties, may deputize any other physician in the area to act as county medical examiner during his absence. If the quarterly county court fails to certify a county medical examiner for a county, or if the county medical examiner resigns or is unable to fulfill the duties of his office during the interim between quarterly court sessions and a deputy has not been appointed by the county medical examiner, the chief medical examiner may appoint a county medical examiner to serve until the next session of the county quarterly court.

A coroner is required to be elected for each county by the justices of the peace in the county court for a term of two years.

Any person who knows of the death of any person from sudden violence or by casualty or by suicide, or suddenly when in apparent health, or when found dead, or in prison, or in any suspicious, unusual, or unnatural manner, or where the body is to be cremated, or the death occurred without medical attendance, is required to immediately notify the county medical examiner or the district Attorney General, the local police, or the county sheriff, who in turn is required to notify the county medical examiner. When the county medical examiner is so notified, he is required to immediately make an investigation of the circumstances of the death and record his findings in quadruplicate, sending one copy to the county coroner and one copy to the chief medical examiner, keeping one copy for his files, and presenting one copy to the district Attorney General if there is evidence of foul play or if in his judgment an autopsy should be performed.

The district Attorney General may order an autopsy only in those cases involving homicides or suspected homicides when recommended by the county coroner and the county medical examiner. If any autopsy is ordered by the district Attorney General, he is required to notify the next of kin of the deceased, when known or reasonably ascertainable, of the impending autopsy. When such autopsy is ordered, the county medical examiner is required to notify the chief medical examiner and to designate and authorize a pathologist certified by the American Board of Pathology or eligible for such certification to perform the autopsy. The person who performs the autopsy is required to report his findings in triplicate submitting one copy to the division of post mortem examinations, one copy to the district Attorney General, and one copy to the county medical examiner.

When an affidavit is made and signed by two or more reliable persons, averring that a death has occurred and that there is good reason to believe that such person came to his death by unlawful violence at the hands of some other person, a coroner is required to summon a jury of inquest to inquire into who the person, and when, where and by what means he came to his death. The coroner may summon as a witness a surgeon or physician, when requested to do so by the district Attorney General, to make examination of the body, including the performing of an autopsy, and give a professional opinion as to the cause of death. The coroner is required to return the inquisition to the criminal court, if any, and, if not, to the circuit court of his county.

In case of an airplane accident where death occurs at the time of the accident, the county medical examiner or coroner of the county where the accident occurs may remove the remains of the pilot or any passenger, if there is reason to suspect that the passenger contributed in any material way to the accident, to the nearest laboratory directed by a pathologist certified by the American Board of Pathology at which place the county medical examiner may order such pathological examinations including autopsies as he deems necessary.

In those cases where no physician attended the deceased during his last illness, the county medical examiner, county health officer, or coroner, if there is no county medical examiner, is required to certify the cause of death on the death certificate to his best knowledge and belief.

All reports of the county medical examiners, toxicological report, and autopsy reports are public records and a certified copy of each may be obtained by any person upon payment of a prescribed fee.

Although original records of death permanently filed in the Tennessee Department of Public Health, Vital Records are considered confidential, certified copies are issued to those persons and organizations who can establish a legal right to the data.

Tennessee has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Tenn. Code Ann. Const., Art. 7, § 1; § 5-512; § 8-901; §§ 38-401, 38-404, 38-407, 38-413, 38-437; §§ 38-702, 38-703, 38-704, 38-706, 38-708, 38-709, 38-710, 38-715; § 53-415.

TEXAS

Texas's death investigation system consists of justices of the peace and medical examiners.

Justices of the peace are required to hold inquests, with or without a jury, within their respective counties when a person dies in prison or in jail; or when any person is killed, or from any cause dies an unnatural death, except under sentence of the law, or dies in the absence of one or more good witnesses; or when the body of a human being is found dead and the circumstances of his death are unknown; or when the circumstances of the death of any person are such as to lead to suspicion that he came to his death by unlawful means; or when any person commits suicide, or the circumstances of his death are such as to lead to suspicion that he committed suicide; or when a person dies without having been attended by a duly licensed and practicing physician and the local health officer or registrar required to report the cause of death does not know the cause of death; or when a person dies who has been attended by a duly licensed and practicing physician and such physician is not certain as to the cause of death and is unable to certify with certainty the cause of death as required by law.

In those deaths which require that an inquest be held, the justice of the peace may call in the County Health Officer, or if there is none or if his services are not obtainable, a duly licensed and practicing physician to procure his opinion and advice on whether or not to order an autopsy to determine the cause of death. If the justice of the peace determines that an autopsy is necessary, he is required to request the County Health Officer, or if there is none or if it is impracticable to secure his service, a duly licensed and practicing physician trained in pathology to make an autopsy to determine the cause of death, and whether death was from natural causes or resulting from violence.

In those cases where a complete autopsy is deemed unnecessary by the justice of the peace to ascertain the cause of death, he may order the taking of blood samples or any other samples of fluids, body tissues or organs to ascertain the cause of death or whether any crime has been committed. In the case of a body of a human being whose identity is unknown, the justice of the peace may authorize such investigative and laboratory tests and processes as are required to determine the identity as well as the cause of death. If during the inquest it becomes necessary to determine whether the death has been produced by poison, the justice of the peace, upon his own determination, or upon request of the physician performing the autopsy, is required to call in to his aid some expert, chemist, toxicologist, or licensed physician practicing pathology, qualified to make an analysis of the stomach and its contents, together with such other portions of the body as may be necessary to determine the presence of poison in the body.

Each justice of the peace is required to keep full and complete records properly indexed of all the proceedings relative to every inquest held by him, including the name of the deceased, if known, or if not, as accurate a description of him as can be given; the time, date and place where the inquest was held; the testimony taken by the justice, and by whom; the full report and detailed findings of the autopsy, if any; the findings by the justice at the inquest, and the person's identity as well as everything material relating to the inquest. Each justice holding an inquest is also required to certify the proceedings, and to enclose in an envelope the testimony taken, the findings of the justice, and all other papers connected with the inquest, and to seal up such envelope and without delay deliver it properly endorsed to the clerk of the district court. In those cases investigated by a justice of the peace, he is required to make the certificate of death.

The commissioners court of any county having a population of more than five hundred thousand according to the last preceding federal census and not having a reputable medical school is required to establish and maintain the office of medical examiner. In any other county, the commissioners court may establish and provide for the maintenance of such office. The commissioners court is required to appoint a medical examiner to serve at the pleasure of the commissioners court. Each medical examiner is required to be a physician licensed by the State Board of Medical Examiners and to the greatest extent possible, a physician having training and experience in pathology, toxicology, histology and other medicolegal sciences. Each medical examiner may, subject to the approval of the commissioners court, employ such deputy medical examiners, scientific experts, trained technicians, officers and employees as may be necessary to the proper performance of the duties of his office.

The commissioners court of two or more counties may enter into an agreement to create a medical examiners district and to jointly operate and maintain the office of medical examiner of the district. Each district so created must include the entire area of all counties involved and the counties within the district must, when taken together, form a contiguous area. There may be only one medical examiner in a medical examiners district, although he may employ, within the district, necessary staff personnel. Each district medical examiner within his district has all the powers and duties that a medical examiner who serves in a single county has within that county.

Medical examiners, or their duly authorized deputies, are required to hold inquests with or without a jury within their respective counties in the following cases: when a person dies within twenty-four hours after admission to a hospital or institution or in prison or in jail; when any person is killed, or from any cause dies an unnatural death, except under sentence of the law, or dies in the absence of one or more good witnesses; when the body of a human being is found, and the circumstances of death of any person are such as to lead to suspicion that he came to his death by unlawful means; when any person commits suicide, or the circumstances of his death are such as to lead to suspicion that he committed suicide; when a person dies without having been attended by a duly licensed and practicing physician, and the local health officer or registrar required to report the cause of death does not know the cause of death; and when a person dies who has not been attended immediately preceding his death by a duly licensed physician is not certain as to the cause of death and is unable to certify with certainty the cause of death as required by law.

If the medical examiner as a result of his investigation determines the cause of death beyond a reasonable doubt, he is required to file a report setting forth specifically the cause of death with the district attorney or criminal district attorney, or in a county in which there is no district attorney or criminal district attorney, with the county attorney of the county in which the death occurred. If in the opinion of the medical examiner an autopsy is necessary, or if an autopsy is requested by the district attorney or criminal district attorney, or county attorney where there is no district attorney or criminal district attorney, an autopsy is required to be immediately performed by the medical examiner or a duly authorized deputy.

In those cases where a complete autopsy is deemed unnecessary by the medical examiner to ascertain the cause of death, the medical examiner may perform a limited autopsy involving the taking of blood samples or any other samples of body fluids, tissues or organs, to ascertain the cause of death or whether a crime has been committed. In the case of a body of a human being whose identity is unknown, the medical examiner may authorize such investigative and laboratory tests and processes as are required to determine its identity as well as the cause of death. Upon completion of the autopsy, the medical examiner is required to file a report setting forth the findings in detail with the office of the district attorney or criminal district attorney of the county, or if there is no district attorney or criminal district attorney, with the county attorney of the county.

Each medical examiner is required to keep full and complete records, properly indexed, giving the name, if known, of every person whose death is investigated, the place where the body was found, the date, the cause and manner of death, and is required to issue a death certificate. The full report and detailed findings of the autopsy, if any, are required to be a part of the record. Copies of all records are required to be promptly delivered to the proper district, county, or criminal district attorney in any case where further investigation is deemed advisable.

All medical examiners' records are public records and may be inspected or duplicated by any person. In those cases in which an autopsy is performed, the designated physician performing the autopsy is required to file his autopsy report within thirty days of its request with the medical examiner or justice of the peace under the autopsy order unless certain tests are required to be made which cannot be complete within the required time limit and the designated physician so certifies when the report is filed. A copy of the autopsy report is required to be furnished to any duly authorized person upon payment of a prescribed fee.

Subject to the regulations of the State Department of Health controlling the accessibility of vital records, the State Registrar is required, upon request, to supply any properly qualified applicant a certified copy of all or any part of any record filed by a medical examiner or justice of the peace.

Texas has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Tex. Rev. Civ. Stat.
Art. 49.01, 49.03, 49.06;
Art. 49.25, §§ 1, 1-a, 2, 3, 6, 9, 11;
Art. 4477, Rule 41a, Rule 54a,
Art. 4477n; § 6252-17a.

UTAH

Utah has a medical examiner death investigation system.

The director of the division of health, with the approval of the board of health, is required to appoint a Utah State medical examiner to serve at the will of the director of the division of health. The Utah State medical examiner is required to be licensed to practice medicine in Utah and a qualified pathologist. The Utah State medical examiner may appoint such deputies and employ such technical and clerical personnel as may be required to effectively administer the duties of his office. In addition, medical examiners may be appointed by the county commissioners for their respective counties.

The various medical examiners are required to investigate those deaths that appear to be: deaths by violence, gunshot, suicide, or accident, except highway accidents; sudden death while in apparent health; unattended deaths; deaths under suspicious or unusual circumstances; deaths resulting from poisoning or overdose of drugs; deaths resulting from diseases that may constitute a threat to the public health; deaths resulting from injury, toxic effect or unusual exertion incurred within the scope of the deceased's employment; deaths due to sudden infant death syndrome; and deaths resulting while the deceased was in prison, jail, in police custody for any reason, or in the State hospital, or in a detention or medical facility operated for the treatment of the mentally ill or emotionally disturbed or delinquent persons.

When a death occurs under any of the above described circumstances, any person finding or having custody of the body is required to immediately notify the nearest law enforcement agency. The law enforcement agency having jurisdiction over the offense is required to then proceed to the place where the body is and conduct an investigation whether there exists any criminal responsibility for the death. On a determination by the law enforcement agency that death may have occurred in any of the ways described above, such death is required to be reported to the county attorney of the jurisdiction and to the medical examiner by the law enforcement agency having jurisdiction over the investigation of the incident.

Upon receiving such notification, the medical examiner is required to assume lawful custody of the deceased body, clothing of the body, and any article on or near the body which may aid him in determining the cause of death except to those articles which will assist the investigative agency to proceed without delay with the investigation. If, in the opinion of the medical examiner or his deputy, an autopsy should be performed, or if an autopsy is requested by the county attorney, such autopsy is required to be performed by the medical examiner or a pathologist appointed by the medical examiner. A complete copy of all written records and reports of investigations and facts resulting from all autopsies so conducted, and the written reports of any investigative agency making inquiry into the incident are required to be promptly made and filed with the medical examiner. The certificate of cause of death which occurs under any of the above described circumstances is required to be made by the medical examiner or his designated representative only.

Whenever there is no physician in attendance at the last illness of a deceased person or whenever an attending physician is unable to determine with reasonable certainty the cause of death, the medical examiner or his deputy is required to be notified. If the medical examiner, upon determining the cause of death, has reason to believe that there may be criminal responsibility for the death, he is required to so notify the county attorney or the head of the law enforcement agency having jurisdiction to make further investigation into the death.

The Utah State medical examiner is required to keep and maintain full and complete original records, properly indexed, giving the name, if known, or otherwise identifying every person whose death is investigated, the place where the body was found, the date, cause and manner of death, the occupation of the decedent if available, and all other relevant information concerning the death. A full report and detailed findings of the autopsy or report of the investigation are required to be part of the record in each case. The medical examiner is required to promptly deliver to the county attorney having criminal jurisdiction over the case copies of all pertinent records relating to every death. The county attorney, the Attorney General, or other law enforcement official may, upon written request, secure copies of the original of the records where necessary for the performance of his duties.

The Utah State medical examiner is responsible for maintaining the confidentiality of his records and may release such records only to law enforcement officials having jurisdiction and according to written rules established by the Utah State board of health.

The State Registrar of Vital Statistics and local registrars may permit the inspection of a death certificate or issue a certified copy of all or any part of a death certificate when they are satisfied that the applicant for such certificate has a direct, tangible, and legitimate interest in the information and certificate requested.

Utah law defines sudden infant death syndrome as the death of a child who was thought to be in good health or whose terminal illness appeared to be so mild that the possibility of fatal outcome was not anticipated. Under Utah law, the medical examiner is required to investigate and certify the cause, date, and place of death for those deaths that appear to be due to sudden infant death syndrome.

Citations: Utah Code Ann. §§ 26-15-17, 26-15-26; §§ 26-20-2, 26-20-4, 26-20-5, 26-20-6, 26-20-7, 26-20-8, 26-20-10, 26-20-11, 26-20-14, 26-20-17.

VERMONT

Vermont has a medical examiner death investigation system.

The State board of health is authorized to contract with any person, institution, or State department for the performance of any or all of the duties of the chief medical examiner.[1] The chief medical examiner is required to appoint licensed doctors of medicine or osteopathy geographically distributed throughout the State to serve indefinite terms at the pleasure of the chief medical examiner as regional medical examiners. The various medical examiners are required to investigate those deaths when a person dies from violence, or suddenly when in apparent good health or when unattended by a physician or a recognized practitioner of a well-established church, or by casualty, or by suicide or as a result of injury or when in jail or prison, or any mental institution, or in any unusual, unnatural or suspicious manner, or in circumstances involving a hazard to public health, welfare or safety.

Whenever a medical examiner is notified that a death has occurred under any of the above described circumstances, he is required to notify the State's attorney of the county in which the death occurred. The State's attorney, after such notification, is in charge of the body and is required to issue such instructions concerning the care or removal of the body as he deems appropriate. The medical examiner and a designated[2] law enforcement officer are required together to immediately make a proper preliminary investigation. Unless the cause and manner of death is uncertain, the medical examiner is required to complete and sign the certificate of death. The medical examiner and the designated law enforcement officer are each required to submit a report of investigation to the State's attorney and the chief medical examiner.

If the cause or circumstances of death are uncertain, the medical examiner is required to immediately so advise the State's attorney of the county where the death occurred, and notify the chief medical examiner. The State's attorney or chief medical examiner, if either deem it necessary and in the interest of public health, welfare and safety, or in furtherance of the administration of the law, may order an autopsy to be performed by the chief medical examiner or under his discretion. Upon completion of the autopsy the chief medical examiner is required to submit a report to the State's Attorney General and to complete and sign the certificate of death.

Certified copies of death certificates are available to any person upon payment of a fee.

No statutory provision exists relative to the accessibility of reports by next of kin.[3]

Vermont has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.[4]

Footnotes: [1] Since 1953, when the medical examiner system in Vermont was established, all commissioners and State boards of health have followed the precedent of requiring that each candidate for chief medical examiner be a doctor of medicine, a pathologist, and, finally, certified as a forensic pathologist with the American Board of Pathology.

[2] The term "designated", in usage, has become synonymous with "full-time".

[3] Next of kin are permitted to have access to reports by the chief medical examiner when release is provided by the pertinent State's attorney.

[4] Under present law, the office of the chief medical examiner states that Vermont has achieved nearly 100% autopsy coverage of those deaths suspected to have been caused by sudden infant death syndrome.

Citations: Vt. Stat. Ann. Tit. 18, §§ 507, 508; Tit. 18, § 5205; Tit. 32, §§ 1712, 1715.

VIRGINIA

Virginia has a medical examiner death investigation system.

A Chief Medical Examiner, who is required to be a skilled pathologist and eligible to be licensed as a doctor of medicine, is required to be appointed by the State Health Commissioner with the approval of the State Board of Health. Each three years, the Chief Medical Examiner is required to appoint for each county and city in Virginia one or more medical examiners to serve for terms of three years. Each medical examiner is required to be appointed from a list of two or more licensed doctors of medicine submitted by the component medical society of the county or city in which the appointment is to be made, or of the district in which the county or city is located. If a list of names is not submitted by any component medical society, the Chief Medical Examiner is required to appoint a medical examiner from the licensed medical doctors of the county or city. If a medical examiner of any county or city, on account of illness or enforced absence or personal interest is unable to serve in any particular case or for any period of time, the Chief Medical Examiner is required to designate some other qualified doctor of medicine in the county or city to serve in the place of the regular medical examiner in making any examination or report required.

Each medical examiner is required to investigate those deaths of persons which result from violence, or occur suddenly when in apparent health, or when unattended by a physician, or in prison, or in any suspicious, unusual or unnatural manner. The Chief Medical Examiner is required to furnish all medical examiners full directions as to the nature, character and extent of the investigation to be made in such cases, together with appropriate forms for the required reports and instructions for their use.

Upon receiving notice that a death has occurred under any of the above described circumstances in his county or city, the medical examiner is required to take charge of the dead body, make inquiries regarding the cause and manner of death, reduce his findings to writing, and promptly make a full report of his investigation to the Chief Medical Examiner on forms prescribed for such purpose, retaining one copy of his report for his own and delivering another copy to the attorney for the Commonwealth of his county or city.

If in the opinion of the medical examiner or of the Chief Medical Examiner it is advisable and in the public interest that an autopsy be made, or if an autopsy is requested by the attorney for the Commonwealth or by the judge of the circuit or corporation court of the county or city in which the dead body is, an autopsy is required to be made by the Chief Medical Examiner, or by such competent pathologist or toxicologist as may be designated by the Chief Medical Examiner.[1] A full record and report of the facts developed by the person making the autopsy are required to be promptly made and filed with the medical examiner and in the Office of the Chief Medical Examiner. A copy of the report of the autopsy is required to be furnished the attorney for the Commonwealth if in the opinion of the Chief Medical Examiner or the medical examiner it is proper, or if such report is requested by the attorney for the Commonwealth of the county or city where death occurred or of the county or city in which any injury contributing to or causing death was sustained. In all deaths which a medical examiner is required to investigate or which occur without medical attendance, the medical examiner is required to investigate the cause of death and to complete and sign the medical certification portion of the death certificate.

Under Virginia law, all official records, except as otherwise specifically provided by law, are required to be open to inspection and copying by any citizen of Virginia during the regular office hours of the custodian of such records. Although the applicability of such law to the records in the Office of the Chief Medical Examiner has not been officially construed, it has long been the policy of such office to make its official reports, including autopsy reports, available to the next of kin upon their request, unless for good cause shown the attorney for the Commonwealth or the appropriate law enforcement agency requests that such disclosure not be made.

Under regulations issued by the State Board of Health, the State Registrar or the county or city registrar is required, upon request, to disclose data or issue certified copies of death certificates or information when satisfied that the applicant for such record has a direct and tangible interest and that the content of the record is necessary for the determination of personal or property rights.

Virginia has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Footnote: [1] In practice, the Chief Medical Examiner never designates a toxicologist to perform an autopsy.

Citations: Va. Code Ann. § 2.1-342; §§ 32-31.10, 32-31.12, 32-31.15, 32-31.16, 32-31.17, 32-31.18, 32-31.19, 32-31.20; §§ 32-353.20, 32-353.26, 32-353.27.

WASHINGTON

Washington has a county coroner death investigation system.

In class AA, class A, first, second, and third class counties, a county coroner is required to be elected from among the qualified voters of the county. In fourth, fifth, sixth, seventh, eighth, and ninth class counties, the county prosecuting attorney, who is also required to be elected from among the qualified voters of the county, is ex officio coroner. If the office of coroner is vacant, or he is absent or unable to attend, the duties of his office may be performed by any justice of the peace in any county.

Coroners have jurisdiction over the bodies of all deceased persons who have come to their death suddenly when in apparent good health without medical attendance within the thirty-six hours preceding death; or where the circumstances of death indicate death was caused by unnatural or unlawful means or where death occurs under suspicious circumstances; or where a coroner's autopsy or post mortem or coroner's inquest is to be held; or where death occurs within one year following an accident; or where death is caused by any violence whatsoever, or where death results from a known or suspected abortion, whether self-induced or otherwise; where death apparently results from drowning, hanging, burns, electrocution, gunshot wounds, stabs or cuts, lightning, starvation, radiation, exposure, alcoholism, narcotics or other addictions, tetanus, strangulations, suffocation or smothering; or where death is due to premature birth or stillbirth; or where death is due to a violent contagious disease or suspected contagious disease which may be a public health hazard; or where death results from alleged rape, carnal knowledge or sodomy; where death occurs in a jail or prison; or where a body is found dead or is not claimed by relatives or friends.

In any case in which the coroner has jurisdiction, he may make or cause to be made an autopsy or post mortem by a competent pathologist, toxicologist, or physician. In an industrial death where the cause of death is unknown, and where the department of labor and industries is concerned, the department may request the coroner to perform an autopsy to determine the cause of death. When so requested, the coroner is required to promptly perform such autopsy. The coroner may, with the approval of the University of Washington and with the consent of a parent or guardian, deliver any body of a deceased person under the age of three years over which he has jurisdiction to the University of Washington Medical School for the purpose of having an autopsy made to determine the cause of death.

If the deceased died without medical attendance, the coroner or prosecuting attorney having jurisdiction is required to certify the cause of death according to his best knowledge and belief.

If the coroner suspects that the death of any person was unnatural, or violent, or resulted from unlawful means, or from suspicious circumstances, or was of such a nature as to indicate the possibility of death by the hand of some other person, he may summon a coroner's jury to inquire into and render a true verdict on the cause of death. The coroner may summon a surgeon or physician to inspect the body and give under oath a professional opinion as to the cause of death. In all cases where murder has been committed, the coroner is required to immediately file the written testimony, inquisition, and recognizance with the clerk of the superior court of the county.

Under Washington law, reports and records of autopsies or post mortems are confidential, except to the prosecuting attorney or law enforcement agencies having jurisdiction, or to the department of labor and industries in cases in which the department has requested that an autopsy be performed. Any party by showing just cause may petition the court to have an autopsy and the results of such autopsy made known to such party at his own expense. Under current practice, autopsy reports and consultations are available to the next of kin.

Each coroner may, with the approval of the University of Washington and with the consent of a parent or guardian deliver any body of a deceased person under the age of three years over which he has jurisdiction to the University of Washington Medical School for the purpose of having an autopsy made to determine the cause of death. When such autopsy is performed, the University of Washington Medical School is required to bear the cost of autopsy.[1]

Footnote: [1] Since 1967, no funds have been appropriated to carry out sudden infant death syndrome autopsy examinations. The University of Washington has therefore reserved the right to refuse to perform an infant death autopsy from outside King County because of limited funds.

Citations: Wash. Rev. Code
§§ 36.16.030; §§ 36.24.020, 36.24.060, 36.24.080, 36.24.160;
§ 42.17.250 through § 42.17.340;
§§ 68.08.010, 68.08.100, 68.08.102, 68.08.103, 68.08.104, 68.08.105;
§ 70.58.170.

WEST VIRGINIA

West Virginia has a medical examiner death investigation system.

The commission on post mortem examinations, a six-member commission consisting of a member of the West Virginia department of public safety, a person qualified to practice law before the West Virginia supreme court of appeals, a funeral director licensed by the West Virginia board of embalmers and funeral directors, a person licensed to practice medicine and surgery by the medical licensing board of West Virginia, a person licensed to practice medicine and surgery by the West Virginia board of osteopathy, and a person who represents the public generally, is required to supervise the office of medical examinations and to appoint a chief medical examiner to direct such office. The chief medical examiner, who is required to be a physician licensed to practice medicine in West Virginia and a diplomate or eligible for certification by the American Board of Pathology or the American Osteopathic Board of Pathology, serves at the will and pleasure of the commission on post mortem examinations.

The Chief Medical Examiner may employ such assistants, pathologists, toxicologists, laboratory technicians, regional medical examiners, and other staff members as the commission on post mortem examinations may specify. For each county in West Virginia, the commission on post mortem examinations is required to appoint a medical examiner to serve for a term of three years. Each medical examiner so appointed is required to be a qualified physician who is licensed to practice medicine in West Virginia. If it should become necessary, because of illness, absence, need or personal interest, the Chief Medical Examiner may appoint any other qualified physician in the county in which a death is to be investigated to act as assistant medical examiner for the county. Each medical examiner is required to investigate those deaths when a person dies in West Virginia from violence, or by apparent suicide, or suddenly when in apparent good health, or when unattended by a physician, or when in inmate of a public institution not hospitalized for organic disease, or from some disease which might constitute a threat to public health, or in any suspicious, unusual or unnatural manner.

Upon receiving notice that a death has occurred under any of the above described circumstances, the medical examiner is required to take charge of the dead body, make inquiries regarding the cause and manner of death, reduce his findings to writing, and promptly make a full report of his findings to the Chief Medical Examiner, retaining one copy of his report for his own office records, and delivering another copy of his report to the prosecuting attorney of the county, and to any attorney of record in any criminal proceedings or civil action in which the cause of death is in issue.

If in the opinion of the Chief Medical Examiner, or of the medical examiner of the county in which the death occurred, it is advisable and in the public interest that an autopsy be made, or if an autopsy is requested by either the prosecuting attorney or the judge of the circuit court or other court of record having criminal jurisdiction in the county, an autopsy is required to be made by the Chief Medical Examiner, by a member of his staff, or by a competent pathologist designated by the Chief Medical Examiner. A full record and report of the findings developed by the autopsy is required to be filed with the office of medical examinations by the person making the autopsy. Within the discretion of the Chief Medical Examiner, or of the person making the autopsy, or if requested by the prosecuting attorney of the county or of the county where any injury contributing to or causing the death was sustained, a copy of the report of the autopsy is required to be furnished to the prosecuting attorney.

The office of medical examinations is required to keep full, complete, and properly indexed records of all deaths investigated, containing all relevant information concerning the death, including any autopsy report. Any prosecuting attorney or law enforcement officer may secure copies of such records or information necessary to him for the performance of his official duties.

When death occurs in any manner subject to investigation, the medical examiner is required to investigate the cause of death and complete and sign the medical certification on the death certificate.

Copies of all records or information in the office of medical examinations are required to be furnished, upon request, to any party to whom the cause of death is a material issue.

Under West Virginia law, it is unlawful for any person to permit inspection or disclosure of confidential information contained in records of death, or to copy or issue a copy of all or any part of such confidential information except as authorized by law or by order of a court having jurisdiction or by rule and regulation duly adopted by the State board of health. Current regulations provide that the State Registrar is required to permit the inspection of a record only when he is satisfied that the applicant for such record has a direct and tangible interest in the content of the record and that the information contained in the record is necessary for the determination of a personal or property right.

West Virginia has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: W. Va. Code Ann.
§§ 16-5-19, 16-5-26, 16-5-27;
§§ 61-12-1, 61-12-3, 61-12-7, 61-12-8,

61-12-10;
West Virginia Vital Statistics Regulation, §§ 10.1, 10.2.

WISCONSIN

Wisconsin's death investigation system consists of county coroners and medical examiners.

In counties having a population of less than 500,000, unless a medical examiner system has been instituted by the county, a coroner is required to be elected by the electors of the county for a term of two years. Within ten days after entering upon the duties of his office, each coroner may appoint one or more proper persons who are residents of his county as deputy coroner to hold office during the pleasure of the coroner. In counties having a population of 500,000 or more and in all counties which have instituted a medical examiner system, a medical examiner is required to be appointed by the county board of supervisors. Each medical examiner may appoint such assistants as the county board authorizes.

Coroners and medical examiners are required to investigate those deaths which occur under any of the following circumstances: all deaths in which there are unexplained, unusual or suspicious circumstances; all homicides; all suicides; all deaths due to poisoning, whether homicidal, suicidal or accidental; all deaths following accidents, whether the injury is or is not the primary cause of death; when there was no physician, or accredited practitioner of a bona fide religious denomination relying upon prayer or spiritual means for healing in attendance within thirty days preceding death; when a physician refuses to sign the death certificate; or when the dead body is to be cremated.

Whenever the district attorney has notice of the death of any person in his county and from the circumstances surrounding the death of any person in his county there is reason to believe that murder, manslaughter, homicide resulting from negligent control of vicious animal, homicide by reckless conduct, homicide by negligent use of vehicle or firearm, or homicide by intoxicated use of vehicle or firearm may have been committed, or that death may have been due to self-murder or unexplained or suspicious circumstances, except in cases where a criminal warrant has been issued, he is required to immediately order the coroner or deputy coroner, or medical examiner to conduct an inquest as to how the person came to his death.

A coroner or medical examiner may hold an inquest without being first notified by the district attorney, and may dispense with the summoning of a coroner's jury and conduct the inquest himself. The coroner or medical examiner may subpoena the attendance of one or more competent physicians or surgeons to make an examination of the body and testify at the inquest, and may conduct an autopsy or order the conducting of an autopsy upon the body of the deceased. In all cases where an autopsy is not performed, the coroner or medical examiner may take for analysis any and all specimens, body fluids and any other material which will assist him in determining the cause of death. If the coroner or medical examiner finds that any murder, manslaughter, homicide, by reckless conduct or battery has been committed upon the deceased, he is required to return to the court in the same county at which an indictment for such offense may be found or an information filed the inquisition, written evidence and all examinations taken by him. In all counties which have a medical examiner system, the medical examiner is required to keep in his office proper books containing records of all inquests held by him.

Any coroner or medical examiner who investigates the death of any deceased person or who holds an inquest on the body of any deceased person may make and sign a certificate of death stating the nature of the disease, or the manner of death, and if from external causes or violence whether probably accidental, suicidal, or homicidal, as determined by the inquest or investigation, and furnishing such other information as may be required by the State Registrar to classify the death.

All records of coroners and medical examiners may with proper care be examined or copied by any person subject to such orders or regulations as may be prescribed.

The State Registrar or the local registrar of any city is required, upon request, to furnish to any applicant a certified copy of any record of death in his possession.

Wisconsin has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Wis. Stat.
Const., Art. VI, § 4; § 19.21; §§ 59.34, 59.365; §§ 69.23, 69.41; §§ 979.01,

979.02, 979.06, 979.11, 979.15, 979.19, 979.20, 979.121.

WYOMING

Wyoming has a county coroner death investigation system.

A coroner is required to be elected in each organized county for a term of four years. In counties having an assessed valuation of fifty million dollars or more, the coroner, by and with the consent of the board of county commissioners, may appoint a deputy coroner to serve in his absence or inability to act. Also, any Justice of the Peace of the same county may perform the duties of coroner in relation to dead bodies. Each county coroner is required to investigate those deaths which are caused by other than natural causes and to hold an inquest upon the dead bodies of such persons only as are supposed to have died by unlawful means, the cause of death is unknown, or who have died by violence.

When a county coroner is notified that the dead body of any person supposed to have died by unlawful means, the cause of whose death is unknown or who died by violence has been found with his county, he is required to summon a jury to inquire into when, how and by what means, if known, the deceased came to his death. When an inquisition is being held, if the coroner or the jury deem it requisite, the coroner may summon one or more physicians or surgeons, to make a scientific examination. The coroner is required to return to district court the inquisition, the written evidence, and a list of witnesses who testify material matter.

When a county coroner is notified that the dead body of any person has been found within his county and that the circumstances of the case suggest that the death was caused by other than natural causes, he is required to examine the body and consider the history of the case, and obtain the assistance and advice of a competent physician to assist him in determining the cause of death by examination of the body, autopsy, inquest or other procedure that may be determined necessary. The coroner is required to complete and sign the medical certification of cause of death on the death certificate. A non-medical coroner may not diagnose the cause of death without the assistance and advice of a competent physician.

All books and papers required to be in the office of the coroner and the district court are open to the examination of any person.

Under Wyoming law, it is unlawful for any person to permit inspection or disclosure of information contained in vital records, or to copy or issue a copy of all or any part of such records except as authorized by regulations issued by the division of health and medical services. Current regulations provide that the State Registrar of vital records or the custodian of permanent local records may not permit the inspection or disclosure of information contained in vital records, or copy or issue a copy of all or any part of such records unless he is satisfied that the applicant has a direct and tangible interest in such information.

Wyoming has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Wyo. Stat. Ann. §§ 7-77, 7-80, 7-81, 7-85, 7-87, 7-89, 7-90; § 18-58; § 35-79.18; Rules and Regulations, Vital Statistics Services, Ch. XIV, § 1.

AMERICAN SAMOA

In American Samoa, the death of any person is required to be reported promptly by the occupant of the house or place where the death occurred, or by the relatives of the deceased to the pulenuu of the village where the death occurred, together with such particulars as the pulenuu may request. The pulenuu is required to report all deaths, with such particulars as may be required, within ten days following the death to the department of medical services, which is required to forward such reports to the registrar of vital statistics. In case any dead body is found, and in case of any accidental death or death allegedly caused by unlawful means, the pulenuu is required to report it without delay to the Attorney General for investigation. If such is not possible, the pulenuu is required to report it to the local representative of the department of medical services, who is authorized to act as coroner to investigate and report his findings to the Attorney General. When any person dies and the cause of death cannot otherwise be satisfactorily ascertained, an autopsy of the body may be performed to discover the cause of death if the Attorney General certifies in writing that the autopsy is necessary for the detection of possible crime, or if the director of medical services certifies in writing that the autopsy is necessary for public health purposes.

Certificates of death are required to be completed by the department of medical services of the Government of American Samoa and forwarded to the registrar of vital statistics as soon as possible.

Upon payment of a fee, a certified copy of a certificate of death may be issued by the registrar of vital statistics.

American Samoa has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: A.S. Code Ch. 1, § 2; Ch. 21, §§ 2702, 2704, 2706, 2708.

CANAL ZONE

The death investigation system of the Canal Zone consists of a health director and coroners.

The Governor of the Canal Zone is required to appoint a coroner for the Canal Zone, and to prescribe regulations relating to the office of coroner including the procedure for investigating deaths. The Governor may also appoint such deputy coroners as may be required. The coroner or deputy coroner is required to investigate, and determine and record the cause of, the death of any person whose body is found in the Canal Zone, or whose body is brought into the Canal Zone, whenever: there is reason to believe that death was caused by violence or unlawful means, suicide, or accident or casualty; or the deceased was not under the care of a physician at the time of death; the death was sudden or unusual or occurred under suspicious circumstances. In the investigation of a death, the coroner or deputy coroner may order an autopsy if he deems it necessary.

The health director of the Canal Zone is required to perform or have performed a post mortem examination on a body found within the Canal Zone if he obtains the consent of the person having the right and duty to control the disposition of the remains of the deceased to such post mortem examination, and if the cause of death cannot otherwise be definitely determined, or if there is reason to believe that the death may have been due to a disease the knowledge of which, gained by the post mortem examination, would be of importance in guarding the health of the community.

The health director of the Canal Zone may perform or have performed a post mortem examination on any body found within the Canal Zone without the consent of the person having the right and duty to control the disposition of the remains of the deceased if the coroner or deputy coroner has ordered an autopsy in a matter within his jurisdiction, or if there are reasonable grounds to believe that the deceased may have died from a quarantinable disease.

Post mortem examinations on bodies brought into the Canal Zone are required to be performed by the health director or his designee only if the coroner or deputy coroner has ordered an autopsy in a matter within his jurisdiction, or if there are reasonable grounds to believo that the deceased may have died from a quarantinable disease. In such cases, the consent of the person having the right and duty to control the disposition of the remains of the deceased is not required.

There is no statutory indication existing relative to the accessibility of either death certificates or autopsy reports to next of kin.

The Canal Zone has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: C.Z. Code Tit. 6, §§ 4781, 4792, 4783, 4784.

DISTRICT OF COLUMBIA

The District of Columbia has a medical examiner death investigation system. The Mayor of the District of Columbia is required to designate or appoint a chief medical examiner and such deputy medical examiners for the District of Columbia as may be necessary. The chief medical examiner and deputy medical examiners are required to be physicians licensed in the District of Columbia, and the chief medical examiner and at least one deputy medical examiner are required to be certified in anatomic pathology by the American Board of Pathology or be board eligible.

The various medical examiners are required to investigate the following types of deaths occurring in the District of Columbia: violent deaths, whether apparently homicidal, suicidal, or accidental, including deaths due to thermal, chemical, electrical, or radiational injury, and deaths due to criminal abortion, whether apparently self-induced or not; sudden deaths not caused by readily recognizable disease, deaths under suspicious circumstances; deaths of persons whose bodies are to be cremated, dissected, buried at sea, or otherwise disposed of so as to be thereafter unavailable for examination; deaths related to disease resulting from employment or to accident while employed; and deaths related to disease which might constitute a threat to public health.

All law enforcement officers, physicians, undertakers, embalmers, and other persons are required to promptly notify a medical examiner of the occurrence of all deaths coming to their attention which are required to be investigated under any of the above described circumstances. After the medical examiner has received notice of such a death, he is required to take possession of the body and to obtain all essential facts concerning the medical causes of death. If the medical examiner establishes the cause of death with reasonable certainty, he is required to complete a report and issue a death certificate. If the chief medical examiner or the United States attorney is of the opinion that a further investigation as to the cause of death is required or that the public interest so requires, the medical examiner is required to either perform, or arrange for a qualified pathologist to perform, an autopsy on the body of the deceased. The medical examiner is further required to make a complete record of the findings of the autopsy and the conclusions of the medical examiner and to prepare a report, and, upon request, to furnish a copy to the appropriate law enforcement agency.

The chief medical examiner is required to maintain full and complete records and files giving the name, if known, of every person whose death is investigated, the place where the body was found, the date, cause and manner of death, and all other relevant information and reports of the medical examiner concerning the death, and to issue a death certificate.

Death certificates are public records. The collection of fees is authorized for copies of, among other things, death certificates. The only administrative requirement is, apparently, that the applicant must have a proper interest in the record requested.

Any person with a legitimate interest may obtain copies of records maintained by the Chief Medical Examiner upon such conditions and such fees as may be prescribed by the Chief Medical Examiner.

The District of Columbia has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: D.C. Code Ann. § 1-244(g); §§ 6-102, 6-112 (Notes to Decisions); §§ 11-2301, 11-2304, 11-2306, 11-2307, 11-2309.

GUAM

Guam has established the Office of Post-Mortem Examinations to investigate certain human deaths. The Commission on Post-Mortem Examinations, a five member commission which consists of the Attorney General, the Director of Public Safety, the Director of the Department of Public Health and Social Services, the President of the Guam Medical Society, and the Administrator of the Guam Memorial Hospital, is required to control and supervise the operation of the Office of Post-Mortem Examinations, and to name a Chief Medical Examiner to direct the office. The Chief Medical Examiner is required to be a citizen or a permanent resident of the United States and a physician licensed in Guam who has had a minimum of two years postgraduate training in pathology. His term and salary are determined by the Commission on Post-Mortem Examinations. The Office of Post-Mortem Examinations may employ such assistant medical examiners, pathologists, toxicologists, laboratory technicians, regional medical examiners and other staff members as the Commission on Post-Mortem Examinations may specify.

The Office of Post-Mortem Examinations is required to investigate all human deaths which in the opinion of the Chief Medical Examiner arose from the following causes: violent deaths, whether apparently homicidal, suicidal, or accidental, including but not limited to deaths due to thermal, chemical, electrical, or radiational injury, and deaths due to criminal abortion, whether apparently self-induced or not; sudden deaths not caused by readily recognizable disease; deaths under suspicious circumstances; and deaths of persons whose bodies are to be cremated, dissected, buried at sea, or otherwise disposed of so as to be unavailable for examinations. The Office of Post-Mortem Examinations may conduct an autopsy when death occurs in any of the above described circumstances or when death relates to a disease which might cause a threat to public health. The Office of Post-Mortem Examinations is required to further conduct autopsies whenever so ordered by the Attorney General or a court of competent jurisdiction.

The Office of Post-Mortem Examinations is required to keep full and complete records, properly indexed, giving the name, if known, of every person whose death is investigated, the place where the body was found, the date, cause and manner of death, and all other relevant information concerning the death, including the full report and detailed findings of any autopsy. The Office of Post-Mortem Examinations is required to promptly deliver to the prosecuting attorney having criminal jurisdiction over the case copies of all records relating to every death as to which further investigation may be advisable. The Attorney General or Director of Public Safety may upon request receive copies of such records or other information deemed necessary by him to the performance of his official duties. In deaths investigated by the Office of Post-Mortem Examinations, the office is required to issue a death certificate.

Private persons may obtain copies of records kept by the Office of Post-Mortem Examinations upon such conditions as may be prescribed by the Commission on Post-Mortem Examinations provided no person with a legitimate interest in such cases may be denied access.

Guam has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: Guam Civ. Code §§ 49100, 49101, 49102, 49103, 49104, 49108.

PUERTO RICO

Puerto Rico has a forensic physician death investigation system.

The Director of the Institute of Forensic Medicine of Puerto Rico, who is appointed by the Chancellor of the University of Puerto Rico on recommendation of the Dean of the School of Medicine of the University of Puerto Rico, is required to be the forensic physician of Puerto Rico.

As such, he is required to investigate, in their medico-legal aspects, all cases where death occurs under any of the following circumstances: as a result of unlawful acts or when suspected that a crime has been committed; as a result of any accident or act of violence or subsequent to an accident or act of violence if it can reasonably be suspected that there is relation between the accident or the act of violence and the death; suddenly and unexpectedly while the person was relatively or apparently enjoying good health; within the twenty-four hours following admission of a patient to a hospital, clinic or asylum; while the person is in prison; or as a result of an illness or injury caused while in prison, after an abortion or premature birth; through suicide, or suspected as such; as a result of an illness, if factors alien to such illness have contributed to the death; as a result of poisoning, or suspected as such; in relation to or as a result of the occupation of the deceased; unexpectedly during a surgical operation or diagnostic or therapeutic process, including deaths occurring after new or experimental therapeutic processes; while the patient is under anesthesia or recovering from the effects thereof; if caused by physical force such as electricity, heat, cold or irradiations; if caused by acute alcohol intoxication; any death of a narcotic addict; any death from malnutrition, neglect, or exposure to the elements, or as a result of negligence; in a convalescence home, asylum or similar institution; or of a person who was suffering from a contagious disease that might constitute a menace to the public health.

In addition, the forensic physician is required to also conduct an investigation of the cause and manner of death whenever in the course of an autopsy not originally considered as forensic, the pathologist detects any sign or there arises a suspicion that the death has occurred through the perpetration of an unlawful act, or whenever the corpse is to be cremated, or whenever the prosecutor or judge who investigates the death so requests from the forensic physician.

Whenever any person knows that a death has occurred under any of the above described circumstances, he is required to immediately report such death to the Police of Puerto Rico or to any judge or prosecuting attorney, who in turn are required to request the services of the forensic physician to determine the cause and manner of death. In all cases of death of an evidently criminal nature, or suspected as being such, the prosecuting attorney or judge making the investigation, for the purpose of making an official statement, is required to determine whether or not an autopsy of the deceased should be made, and for a more complete elucidation of the circumstances and manner in which the death occurred, is required to report the case to the forensic physician who is required to proceed to the site of the occurrence and make the pertinent investigation. When as a result of his investigation, any doubt arises in the forensic physician's mind as to the real cause of death, or as to the manner in which the death took place, or when, for any other reason, he deems it necessary, he may proceed to perform an autopsy on the deceased. The forensic physician may when he deems it advisable, delegate the discharge of his medico-legal duties to any of his assistant physicians and prescribe such rules, instructions, and methods of procedure as are to be observed in the investigation of cases and in the autopsies that may be performed. When circumstances so demand, the forensic physician or any prosecuting attorney or investigating judge may require that any physician in the Commonwealth of Puerto Rico perform an autopsy.

The forensic physician is required, in every case investigated by him to take notes at the scene of the occurrence concerning all the circumstances he may deem significant, and to immediately render a preliminary report to the investigating attorney. In cases where an autopsy is performed, the results of the autopsy are required to be communicated without delay to the investigating judge or the prosecuting attorney together with any other information that may assist them in elucidating the facts.

The Institute of Forensic Medicine is required to keep a file of all cases investigated by it, as well as those investigated by district assistant forensic physicians. In this file, each case is required to be entered under the name of the victim, if the name is known, place where the body was found, and date of death, and an index to facilitate the prompt finding of cases at all times. Under the date of each case, the original report of the forensic physician and the record of the autopsy, if any, is required to be kept.

The files of all deaths investigated by the forensic physician are required to be kept at the Institute of Forensic Medicine, properly protected and guarded against inspection by unauthorized persons.

Death certificates are required to be filled out by the undertaker or other person in possession of the body and the physician with the General Registry of Vital Statistics. No specific statutory provision relative to accessibility of death certificates by next of kin, nor any "right to know" law exists.

Puerto Rico has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: P.R. Laws Ann. Tit. 18, §§ 697, 698, 699, 699a, 700, 701, 702, 703, 705, 708, 711; Tit. 24, § 1104.

VIRGIN ISLANDS

The Virgin Islands has a medical examiner death investigation system.

There are required to be in the Department of Law such Medical Examiners as the Governor deems necessary for the requirements of the Virgin Islands. Each Medical Examiner is required to be duly licensed to practice medicine in the Virgin Islands. Every Medical Examiner is required to make inquiry into unnatural deaths as prescribed by law and to investigate those deaths which are or appear to be: a violent death, whether by criminal violence, suicide, or casualty; a death caused by unlawful act or criminal neglect; a death occurring in a suspicious, unusual or unexplained manner; a death caused by suspected criminal abortion; a death while unattended by a physician, so far as can be discovered, or where no physician able to certify the cause of death as provided by law can be found; or a death of a person confined to a public institution other than a hospital, infirmary or nursing home.

Whenever there is reason to believe that a death has occurred under any of the above described circumstances, the Commissioner of Health or the Commissioner of Public Safety or their duly authorized representatives is required to report the case to the Medical Examiner in the Judicial Division in which the death occurred. When the Medical Examiner is so informed of a death within his jurisdiction, he is required to go at once to the place where the body is and take charge of it. The Medical Examiner is further required to fully investigate the essential facts concerning the death and before leaving the premises, to reduce all such facts to writing. In the course of the investigation, the Medical Examiner is required to make or cause to be made such examinations, including an autopsy, as in his opinion is necessary to establish the cause of death, or to determine the means or manner of death, or to discover facts, or which is requested in writing by the Attorney General, the United States Attorney or the Commissioner of Public Safety. Each Medical Examiner has the authority when necessary in his opinion to consult with and to request advice, consultation or other assistance from any officer of a department of health or the Department of Public Safety or from any member of the staff of such laboratory designated for such purpose, or from any physician qualified to make and testify on post mortem examinations; and to request from any such person such tests, examinations, or analyses and reports as are necessary in his opinion, with respect to any other matter related to his investigation. In each case investigated by him, the Medical Examiner is required to sign the certificate of death.

All records of the Medical Examiner may be examined and copied by any citizen of the Virgin Islands. A certified copy of the record of any death is required to be supplied by a local registrar, upon request, to any applicant who has a legitimate interest.

The Virgin Islands has no statutory provision relating specifically to the investigation of sudden and unexplained infant deaths.

Citations: V.I. Code Ann. Tit. 3, §§ 115, 881; Tit. 19, §§ 806, 862.

SECTION II:

ABSTRACTS OF STATUTORY LAW FOR EACH STATE AND TERRITORY

The following are abstracts of the statutory bases of death investigation systems among the fifty-six studied jurisdictions.

The format is that of legal analysis keyed to certain functional characteristics correlated to cited statutory provisions. This segment of the study differs from the preceding narrative descriptions insofar as the foci of the abstracts are on individual characteristics of death investigation rather than on the system as a whole. The reader's attention is therefore directed to specific functional traits and their respective authority.

Again, a standardized itinerary of functional traits has been utilized in formulating these abstracts. Each analysis is statutorily cited by characteristic, and, where mandated by responses to the project's verification process, footnoted as to differences between a strict interpretation of the statutory provision and its administrative implementation.

ALABAMA

TITLE: County coroner (Code of Ala., Tit. 12, § 54).

TERM: Four years (Code of Ala., Tit. 12, § 54).

APPOINTMENT: Elected by qualified voters of each county (Code of Ala., Tit. 12, § 54).

QUALIFICATIONS: None stated.

SUBJECT DEATHS: In the case of any death that occurs without medical attendance a county health officer or coroner shall investigate and make and file the certificate of death. If the county health officer suspects suicide or is unable to ascertain the cause of death or finds circumstances which cause suspicion that the death was caused by the criminal act of another, he shall then refer the case to the coroner or other proper officer for his investigation and certification. In the case of any death that occurs without medical attendance, it shall be the duty of the funeral director or other person in charge of internment to notify the local health officer or the coroner if there is no county health officer by presenting the certificate to the local registrar. (Code of Ala., Tit. 22, §§ 25, 26).

PROCEDURE: It is the general duty of the coroner to hold inquests and perform other duties as required by law (Code of Ala., Tit. 12, § 57); procedure - the coroner, when informed that a person is dead in the county, and that said person died without being attended or examined by a legally qualified physician shall forthwith proceed to the place where the dead person is lying and examine the dead body to ascertain the cause of death and report same in the same manner as inquests are reported. When the coroner is unable to determine the cause of death, he may summon any physician or surgeon who shall make an external post-mortem examination of the dead body and report his opinion of the cause of death to the coroner in writing. If the surgeon or physician is unable to determine the cause of death from an external post-mortem examination, and the coroner has reasonable cause to believe that the deceased came to his or her death by unlawful means, the coroner, may, in such cases, order any physician or surgeon to perform an autopsy or internal examination of the dead body and report the findings of said autopsy to the coroner in writing (Code of Ala., Tit. 15, § 78). The costs of the physician's or surgeon's services are primarily taxed to the county and are on the same fee basis as allowed for attending an inquest, i.e. six cents a mile and $7.50 for the day. (Code of Ala., Tit. 11, § 95 - no further indication of fees for physicians or surgeons as indicated within the statutory scheme.)

ACCESSIBILITY: The State Registrar of vital statistics shall, upon request of any person having a proper interest therein supply a certified copy or authentication of any record registered by him provided that records of birth and death shall not be disclosed except as authorized by the State Board of Health (Code of Ala., Tit. 22, § 42). No indication as to the mechanics of acquiring State Board of Health approval as indicated within the statutes. Code of Ala., Tit. 22, § 26 - coroner or other official must file death certificate, stating inter alia, the cause (disease) of death, or if an external cause, the means of death and whether (probably) accidental, suicidal, or homicidal. See Code of Ala., Tit. 11, § 94 for costs paid by the county treasury in cases where no jury is called and no surgeon is called to do a post-mortem examination.
Autopsy reports - Code of Ala., Tit. 15, § 78: a post-mortem examination or autopsy requires written report to coroner. Code of Ala., Tit. 15, § 83: findings of inquisition reported in writing to clerk of county circuit court.
Public inspection - Code of Ala., Tit. 41, § 139: public officers must keep books. Code of Ala., Tit. 41, § 145 provides that every citizen has a right to inspect any public writing. Every public officer must provide the requesting citizen with a certified copy of the document he seeks. Code of Ala., Tit. 41, § 147.

INFANT DEATH: No statutory indication.

NOTE: Coroner's office abolished in Jefferson County (Code of Ala., Tit. 62, § 170).
Coroner statutes of Code of Ala., Tit. 12 not applicable where coroner functions governed by local law (Code of Ala., Tit. 12, § 66).

ALASKA

TITLE: A.) Coroner (Alaska Stat. § 22.15.110, § 22.15.310); B.) Medical Examiner (Alaska Stat. § 12.65.010).

TERM: A.) Coroner: at the pleasure of the presiding judge, by inference; B.) Medical Examiner: one year (Alaska Stat. § 12.65.010).

APPOINTMENT: A.) Coroner: see NOTE

below; B.) **Medical Examiner:** the commissioner of Health and Social Services (Alaska Stat. § 12.65.010).

QUALIFICATIONS: A.) Coroner: see NOTE below; B.) Medical Examiner: physician licensed to practice in the State (Alaska Stat. § 12.65.010), or employed within Alaska as a physician.

SUBJECT DEATHS: When a person dies unattended by a physician or when no physician is prepared to execute the certificate of death prescribed by the Vital Statistics Act (Alaska Stat. § 12.65.020).

PROCEDURE: The coroner assigned to serve in the place where the death occurred may by written order, direct a medical examiner to view the remains of the deceased person and to perform the post-mortem examination including an autopsy as is in the opinion of the medical examiner to make proper determination of the cause of death and to execute the prescribed death certificate (Alaska Stat. § 12.65.010).

ACCESSIBILITY: Death certificate - the inspection, disclosure, and copying of vital statistic records may occur only when the custodian is satisfied that the applicant has a direct interest in the matter and that the information is necessary for the determination of personal and property rights. Alaska Stat. §§ 18.50.310, 18.50.320. Alaska Administrative Code § 05.925.
Autopsy reports - reports of findings and conclusions are submitted to the district judge or magistrate having jurisdiction. Alaska Stat. § 12.65.020. Inspection and copying of all public writings and records, unless specifically provided otherwise (no specific provisions relative to autopsy reports), is the right of every citizen. Alaska Stat. §§ 09.25.110, 09.25.120.

INFANT DEATH: No statutory indication.

NOTE: Apparently the coroner function in Alaska is a two-tiered system, both of which are primarily judicial in capacity. The first tier is the district judges and magistrates, as an additional duty under Alaska Stat. § 22.15.110, thus their term, appointment, qualifications, and compensation and accountability are the same as those for the district judge function. There are no special provisions in these areas for the coroner function. However, the second tier, which was legislatively created in 1970 and amended in 1975, is that of the public administrator, one of whose functions is to perform as coroner (Alaska Stat. §§ 22.15.310, et seq.) This move is ostensibly an effort to relieve the burden of the inquest from the coroner function and the district judges and magistrates in judicial districts where those functions provide sufficient work. This inference is drawn from the opening sentence of Alaska Stat. § 22.15.310 "when authorized by the Supreme Court." A public administrator is appointed by the presiding judge of each judicial district as compensated on an annual basis, with no apparent qualifications and no specific term. The public administrator is mandated to perform the duties as set for him in Alaska Stat. § 22.15.110, the same as the district judges and magistrates.
- District judges appointed by Governor, Alaska Stat. § 22.15.170; Magistrates appointed by presiding judge of Superior Court, Alaska Stat. § 22.15.170; Public administrator authorized by Supreme Court, appointed by presiding judge of the Superior Court, Alaska Stat. § 22.15.310.

ARIZONA

TITLE: County medical examiner (Ariz. Rev. Stat. Ann. § 11-591). See NOTE on exception (Ariz. Rev. Stat. Ann. § 11-592).

TERM: No statutory indication; apparently at the pleasure of the county board of supervisors.

APPOINTMENT: County board of supervisors (Ariz. Rev. Stat. Ann. § 11-591).

QUALIFICATIONS: Licensed in good standing, certified in pathology, and skilled in forensic pathology (Ariz. Rev. Stat. Ann. § 11-591(b)).

SUBJECT DEATHS: Death when not under the current care of a physician for a potentially fatal illness or when an attending physician is unavailable to sign the death certificate, or death resulting from violence, or death occurring suddenly when in apparent good health, or death occurring in prison, or death of a prisoner, or death occurring in a suspicious, unusual, or unnatural manner, or death from a disease or accident believed to be related to the deceased's occupation or employment, or death believed to present a public health hazard, or death occurring during anesthetic or surgical procedures (Ariz. Rev. Stat. Ann. § 11-593).

PROCEDURE: The county medical examiner shall be responsible for medical examination or autopsy of a human body when death occurred under any of the circumstances set forth in subsection (a) of section § 11-593; take charge of the dead body of which he or she is notified and after making inquiries regarding the cause and manner of death, certify as to such cause and manner from examination or autopsy or both an examination or autopsy, and then reduce his findings to writing and probably make a full report thereof on forms prescribed for such purpose; execute a death certificate provided by the Bureau of Vital Statistics indicating the cause and manner of death for those bodies in which a medical examination or autopsy is performed; notify the county attorney, and appropriate law enforcement agency. Ariz. Rev. Stat. Ann. §§ 11-593, 11-594.

ACCESSIBILITY: Death certificate - § 36-340: available from State Registrar of vital statistics only as authorized by regulations. Department of Health Rules and Regulations, R9-19-405 provides that applicants with a legal or other vital interest may be eligible for certified copies of death certificates and includes definitions of exactly what individuals or agencies are contemplated within that phrase.
Reports - Ariz. Rev. Stat. Ann. § 11-597: made and filed in the office of the county medical examiner or Board of Supervisors (where list of physicians exists). Ariz. Rev. Stat. Ann. § 39-121.01(5) provides that any person may request to examine or be furnished copies of any public records.

INFANT DEATH: No statutory indication.

NOTE: Ariz. Rev. Stat. Ann. § 11-592 provides for the appointment of a list of physicians in lieu of medical examiner. If the board of supervisors of any particular county determines that the appointment of a medical examiner is not practical, said board shall establish a list of licensed physicians who will be available to perform the duties required of a county medical examiner. Provisions relative to the coroner function apply to the list of physicians.

ARKANSAS

TITLE: A.) County coroner (Ark. Stat. Ann. § 12-2801); B.) State medical examiner (Ark. Stat. Ann. § 42-611).

TERM: A.) Two years (Const., Art. VII, § 46); B.) By inference, indefinite (Ark. Stat. Ann. § 42-613).

APPOINTMENT: A.) Elected by people of each county and commissioned by the Governor (Ark. Stat. Ann. § 12-201); B.) State medical examiner commission (Ark. Stat. Ann. §§ 42-611, 42-613).

QUALIFICATIONS: A.) No statutory indication; B.) Physician licensed to practice in Arkansas for three years, post-graduate work in pathology and one year of medico-legal experience (Ark. Stat. Ann. § 42-613).

SUBJECT DEATHS: Upon the death of any person from violence whether apparently homicidal, suicidal, accidental, or industrial, including but not limited to deaths due to thermal, chemical, electrical, or radiation injury and death due to criminal abortion whether apparently self-induced or not so or suddenly when in apparent good health, or when in a prison, jail, or penal farm or in a suspicious or unusual or unnatural manner (Ark. Stat. Ann. § 42-615). Coroner must be notified of deaths where "the circumstances of the death be unknown." Ark. Stat. Ann. § 42-301. See 1975 Supp. of Ark. Stat. Ann. § 42-301.

PROCEDURE: When a death occurs in such manner or under such circumstances as described in Ark. Stat. Ann. § 42-615, the medical examiner shall have the power and authority to perform such functions and duties as may be provided by this act and to make such examinations and investigations and autopsies as the sheriff or the State medical examiner deem necessary or as may be requested by the prosecuting attorney, the city court, or the sheriff of the county in which the death occurs, or by the chief of police or of the commissioner of the Arkansas Department of Correction or his designeee, if the person is in the care, custody and control of the Department of Correction at the time of death to determine the cause and manner of death. Notice must be provided to the sheriff and the State medical examiner. Ark. Stat. Ann. §§ 42-615, 42-616.
There shall be established a central office and laboratory having adequate facilities for the conduct of autopsies and such pathological, bacteriological, and chemical examinations as may be necessary (Ark. Stat. Ann. § 42-614).

ACCESSIBILITY: Death certificates - Ark. Stat. Ann. § 82-520: filed with the local registrar of the district. The Arkansas Vital Statistics Act of 1975, Ark. Stat. Ann. § 85-501, et seq., in particular § 82-528, Protection and Disclosure of Records, and the Rules and Regulations as promulgated by the act, in particular Regulation 10, Disclosure of Data, certified copies, provide that only individuals with a direct and tangible interest in the record may obtain copies.
Reports - Ark. Stat. Ann. § 42-611: the records, files and information retained or obtained by the State medical

examiner are classified and privileged unless released by direction of the court, prosecuting attorney having criminal jurisdiction, or State medical examiner to persons with legal or scientific interests. Legal interests is apparently an undefined phrase, the application of which is based upon factual documentation.
Arkansas has a Freedom of Information Act: citizens have the right to inspect and copy public records, which are defined in Ark. Stat. Ann. § 12-2803, and § 12-2804, however the applicability of these sections is apparently unknown.

INFANT DEATH: No statutory indication.

NOTE: Ark. Stat. Ann. § 42-301, et seq. established the coroner function as primarily judicial. State Medical Examiner Commission - composed of individuals from medicine, public health, State Police, sheriffs, and chiefs of police.

CALIFORNIA

TITLE: A.) Coroner (Cal. Govt. Code § 27460); B.) County medical examiner in lieu of coroner (medical examiner performing duties of coroner as outlined in Ch. 10, Art. I, §§ 27460 to 27471).

TERM: No statutory indication.

APPOINTMENT: A.) Elected per county (Cal. Govt. Code § 24009); B.) Medical examiner appointed by county board of supervisors (Cal. Govt. Code § 24010).

QUALIFICATIONS: A.) Must be at least 18 and a resident of the county (Cal. Govt. Code § 24001 - 1975 Supp.); B.) Must be a licensed physician and surgeon duly qualified as a specialist in pathology.

SUBJECT DEATHS: Require notification (Cal. Health & Safety Code § 10250): a) without medical attendance; b) during the continued absence of the attending physician; c) where attending physician is unable to state cause of death; d) following injury or accident; f) suspicion of crime.
Require inquiry (Cal. Govt. Code § 27491): violent; sudden; unusual; unattended; abortion related; homicide; suicide; poisoning; accident or injury; drowning; fire; hanging; gunshot; stabbing; cutting; exposure; starvation; alcoholism; criminal means; rape; prison deaths; occupational deaths; public health hazard diseases.

PROCEUDRE: Upon notification, coroner (or medical examiner) in determining that the subject death within the classification of Cal. Govt. Code § 27491, must proceed to location, examine body, make identification, make inquiry into circumstances, manner, and means, and, as circumstances warrant, either order its removal for further investigation or disposition or release to next of kin. Cal. Govt. Code § 27491.2.
Coroner may, in his discretion, take possession, make or cause to be made all post mortem examinations and reduce his findings to writing. Cal. Govt. Code § 27491.4.
Cal. Govt. Code § 27491.5 allows coroner to decide on cause of death without an autopsy "after due medical consultation and opinion has been given by one qualified and licensed to practice medicine and so recorded in the records of the death." Cal. Govt. Code § 27520 provides for autopsy being ordered by surviving parents but costs must be borne by same.

ACCESSIBILITY: Death certificate - Cal. Vital Statistics Code § 10066: coroner or medical examiner must file death certificate with local registrar. Cal. Vital Statistics Code § 10066 also provides for the inspection and accessibility with rules adopted by State department of Health. Cal. Admin. Code §§ 901 and 902 (of Title 17) provide for the procedure on accessibility of death certificates.
Reports - Cal. Govt. §§ 27463 and 27463.5: these statutes provide for the keeping of a coroner's register or official file. Cal. Govt. § 6250 provides public inspection of public records, subject to agency regulations (Cal. Govt. Code § 6253).

INFANT DEATH: Coroner to notify county health officer of infant death after gross autopsy is performed. Cal. Health & Safety Code Art. 3, § 10253; county health officer is required to notify "persons who had custody and control of the infant" and explain SIDS to them. Cal. Govt Code Art. 4, § 462. Cal. Public Health Administration Code Art. 1, § 218 requires State department of health to advise any county health officers re SIDS.

NOTE: Cal. Govt. Code § 27531 - Judge of the Justice Court of the county may perform coroner's functions when coroner is absent, or office is vacant. Cal. Govt. Code § 7113 - autopsy may be done by physician if relatives consent to it. Cal. Govt. Code § 24300 - county board of supervisors may combine office of coroner with the public administrator, district attorney, or sheriff. Cal. Govt. Code § 24304 - counties of the 13th to 57th classes may combine coroner with: public administrator, district attorney, sheriff, health officer, or sheriff and tax collector. Cal. Govt.

Code § 24306 - holders of consolidated office in counties of four million or more need not meet qualifications if board finds the holders competent.

COLORADO

TITLE: County coroner (Constitutional office; Colo. Rev. Stat. Ann. § 30-10-601).

TERM: Four years (Colo. Rev. Stat. Ann. § 30-10-601).

APPOINTMENT: Elected per county (Colo. Rev. Stat. Ann. § 30-10-601, Const. Art. XIV, § 8).

QUALIFICATIONS: Must be a qualified elector within the county and of one year residency (Const. Art. XIV, § 10).

SUBJECT DEATHS: External violence, unexplained cause or under suspicious circumstances; where no physician is in attendance, the physician is unable to certify the cause of death (Colo. Rev. Stat. Ann. § 30-10-606).

PROCEDURE: Coroner shall, if he or the district attorney deem it advisable, cause a post mortem examination of the body of the deceased to be made by a licensed physician to determine the cause of death. When the coroner has knowledge that any person has died under any of the circumstances specified in Colo. Rev. Stat. Ann. § 30-10-606(1), he must summon an inquest. In any case where the coroner orders a post mortem examination he may summon one or more licensed physicians to make a scientific examination of the body of the deceased and each such physician shall be allowed reasonable compensation for his services by the county with the approval of the Board of County Commissioners. (Colo. Rev. Stat. Ann. §§ 30-10-606, 30-10-609)

ACCESSIBILITY: Death certificate - Colo. Rev. Stat. Ann. § 25-2-110; filed with local registrar. Public policy statement that all public records shall be open for inspection except as otherwise provided (Colo. Rev. Stat. § 24-72-201). Death certificates, although confidential, may be provided upon request, to anyone with direct and tangible interest by the Director of Public Health. Colo. Rev. Stat. § 25-2-117.
Reports - Coroner's autopsy reports are considered public records and thus available for inspection and copying per Colo. Rev. Stat. § 24-72-201 through § 24-72-206. See Denver Publishing Company v. Dreyfus, 520 P 2d 104 (1974).

INFANT DEATH: No statutory indication.

CONNECTICUT

TITLE: A.) County coroner (Conn. Gen. Stat. Ann. § 6-50); B.) Chief medical examiner (Conn. Gen. Stat. Ann. § 19-525).

TERM: A.) Three years (Conn. Gen. Stat. Ann. § 6-50); B.) Fixed by the commission on medico-legal investigations (Conn. Gen. Stat. Ann. § 19-528).

APPOINTMENT: A.) By the judges of the Superior Court with the recommendation of the State's attorney (Conn. Gen. Stat. Ann. § 6-50); B.) By the commission (Conn. Gen. Stat. Ann. § 19-528).

QUALIFICATIONS: A.) Must be an attorney at law residing in the county (Conn. Gen. Stat. Ann. § 6-50); B.) Citizen of the United States, Connecticut physician's license, four years practice, post-graduate work in pathology and any other forensic training as required by the commission (Conn. Gen. Stat. Ann. § 19-528).

SUBJECT DEATHS. Violent deaths, whether apprently homicidal, suicidal, or accidental, including but not limited to deaths due to thermal, chemical, electrical, or radiational injury and deaths due to criminal abortion whether apparently self-induced or not; sudden or unexpected deaths not caused by readily recognizable disease; deaths under suspicious circumstances, deaths of persons whose bodies are to be cremated, buried at sea, or otherwise disposed of so as to be thereafter unavailable for examination; deaths related to disease resulting from employment or to accident while employed; deaths related to disease which might constitute a threat to public health (Conn. Gen. Stat. Ann. § 19-530(a)).

PROCEDURE: If the investigation of the circumstances and examination of the body enables the chief medical examiner, the district medical examiner, or an authorized assistant medical examiner, to conclude with reasonable certainty that death occurred from natural causes or obvious traumatic injury and there are no other circumstances which would appear to require an autopsy, the medical examiner in charge shall certify and file a report in the office of the medical examiner. If, in the opinion of such medical examiner an autopsy is required, the same shall be performed by the chief medical examiner, the district medical examiner, or a designated pathologist. Where indicated, the

autopsy shall include toxicological, histological, microbiological, and serological examinations. If a medical examiner has reason to suspect that a homicide has been committed, the autopsy shall be performed by the chief medical examiner or the district medical examiner or by a designated pathologist in the presence of at least one other designated pathologist, if such pathologist is immediately available. A detailed description of the findings of all autopsies shall be written or dictated during the progress. The findings of the investigation at the scene of death, the autopsy, and any toxicological, histological, serological, microbiological examination and the conclusions drawn therefrom shall be filed in the office of the medical examiner. All law enforcement officers, State's attorneys, prosecuting attorneys, coroners, deputy coroners, and other officials, physicians, funeral directors, embalmers, and other persons shall promptly notify the office of the medical examiner of death coming to their attention which, under this chapter, is subject to investigation by the chief medical examiner and shall assist in making dead bodies and related evidence available to that office for investigation. The scene of the death shall be preserved (Conn. Gen. Stat. Ann. §§ 19-501, 19-531). A suitable laboratory with medical, scientific, and other facilities shall be maintained (Conn. Gen. Stat. Ann. § 19-534).
Medical examiner to notify coroner or criminally-oriented deaths (Conn. Gen. Stat. Ann. § 6-57).

ACCESSIBILITY: Death certificate - ostensibly, Conn. Gen. Stat. Ann. § 1-19, which makes records maintained by any public agency public records, provides for access by next of kin. However, this statute, its applicability, and parameters are the subject of litigation in Connecticut.
Reports - Conn. Gen. Stat. Ann. § 19-535: includes autopsy report and a copy of the death certificate. Reports may be made available to the public only through the officer of the medical examiner and in accordance with the regulation of the commission. Any person may obtain copies upon conditions and payment of fees set by the commission, provided no person with a legitimate interest therein shall be denied access. Chief medical examiner may get a court to forbid disclosure upon a showing of compelling public interest against disclosure.
Commission, in its discretion, may allow access by public authorities, professional, medical, legal or scientific bodies or universities or similar research bodies upon conditions and payment of fees set by the commission, as long as the identity of the deceased remains confidential.

INFANT DEATH: No statutory indication.

NOTE: The county coroner is a judicial officer (see Notes of Decisions following Conn. Gen. Stat. Ann. § 6-50). Commission on Medico-Legal Investigations is an independent administrative body comprised of: 2 pathology professors, 2 law professors, 1 member of the Connecticut Medical Society, 1 member of the Connecticut Bar Association, 2 members of the public, selected by the Governor, and the State commissioner of health. Governor appoints, but see Conn. Gen. Stat. Ann. § 19-526 for actual operation.

DELAWARE

TITLE: Chief medical examiner (Del. Code Ann. Tit. 29, §§ 7903(a)(3), 7919).

TERM: Ten years, subject to reappointment (Del. Code Ann. Tit. 29, § 7903(a)(3)).

APPOINTMENT: By the secretary of the Department of Health and Social Services with the written approval of the Governor (Del. Code Ann. Tit. 29, § 7903).

QUALIFICATIONS: A physician licensed to practice in the State and a board certified pathologist with experience in the field of forensic pathology (Del. Code Ann. Tit. 29, § 7903).

SUBJECT DEATHS: When any person shall die as a result of violence by suicide or by casualty if such occurred not longer than one year and one day prior to death, while under anesthesia, by abortion or suspected abortion, by poison or suspicion of poison, or suddenly when in apparent health, or when unattended by a physician, or in any prison or penal institution or when in police custody or from an undiagnosed cause which may be related to a disease constituting a threat to public health or in any suspicious or unusual manner, or if there is any unclaimed body or if any body is to be cremated (Del. Code Ann. Tit. 29, § 4706(a)).

PROCEDURE: Any person having knowledge of a death as described above must notify the chief medical examiner who shall in turn notify the Attorney General. The chief medical examiner must take charge of the dead body, if either he or the Attorney General deem it necessary. The chief medical examiner shall fully investigate the essential facts concerning the medical causes of death. The medical examiner or Attorney General may order an autopsy; reports of the investigation and/or autopsies must be submitted in writing to the office of the chief medical examiner (Del. Code Ann. Tit. 29, §§ 4706, 4707).

ACCESSIBILITY: Death certificate - Del. Code Ann. Tit. 16, § 3125: a certificate of death is filed with the local registrar. Vital statistics records are disclosed only to those having a direct interest in the matter recorded and that the information contained is necessary for the determination of personal or property rights. Del. Code Ann. Tit. 16, § 3110(c). Reports - Del. Code Ann. Tit. 29, § 4707(e): upon written request the next of kin of the deceased shall receive a copy of the post mortem examination report, the autopsy report and the laboratory report, unless there is a pending criminal prosecution.

INFANT DEATH: No statutory indication.

FLORIDA

TITLE: A.) Coroner (Fla. Stat. § 34.01(3)). See NOTE below; B.) District medical examiners and associate medical examiners (Fla. Stat. § 406.06).

TERM: No statutory indication.

APPOINTMENT: A.) Medical examiner's commission (Fla. Stat. §§ 406.02, 406.06); B.) Governor appoints district medical examiners from list of qualified practicing physicians in pathology provided by medical examiner's commission. District medical examiners appoint associate medical examiners.

QUALIFICATIONS: A.) No statutory indication; B.) Qualified physician in pathology.

SUBJECT DEATHS: When any person dies in the State of criminal violence by accident or suicide; suddenly when in apparent good health; unattended by a practicing physician or other recognized practitioner; in any prison or penal institution; in police custody; in any suspicious or unusual circumstances; by criminal abortion; by poison; by disease constituting a threat to public health; by disease, injury or toxic agent resulting from employment; when a body is brought into the State without proper medical certification; when a body is to be cremated, dissected, or buried at sea (Fla. Stat. § 406.11).

PROCEDURE: Medical examiner of the district in which the death occurred or the body was found shall determine the cause of death and shall make and have performed such examinations, investigations, and autopsies as he shall deem necessary or shall be requested by the State attorney (Fla. Stat. § 406.11(1)); autopsy and laboratory facilities are provided on a permanent or contractual basis by the counties within the district (Fla. Stat. § 406.10). Nothing precludes the State from paying the district medical examiner on a part of matching basis (Fla. Stat. § 406.08). When a district medical examiner or associate medical examiner is absent, the State attorney in the county may appoint a physician to perform the duties of the medical examiner.

ACCESSIBILITY: Death certificate - Fla. Stat. § 382.35: the State Registrar is required to furnish a certified copy of all or any part of any death certificate, excluding that portion which contains the medical certification of cause of death, to any person requesting it upon payment of the prescribed fee. A certified copy of the medical certification of cause of death is required to be furnished only to persons having a direct and tangible interest in the cause of death, as provided by Rules and Regulations of the Department of Health and Rehabilitative Services, Ch. 10D and Fla. Stat. § 53.06, Division Rules. Reports - Fla. Stat. § 119.07: all death investigation records may be inspected and examined by any person desiring to do so, at reasonable times, under reasonable conditions, and under supervision by the custodian of the records. Copies or certified copies of such records are required to be furnished upon payment of fees.

INFANT DEATH: No statutory indication.

NOTE: The coroner function within each individual district in Florida is primarily judicial (Ch. 936, Inquests of the Dead, Fla. Stat. § 936.02, et seq.). Fla. Stat. § 406.17 provides for this chapter to supercede all other laws in conflict. In home rule county, which have established medical examiners under provisions under the home rule charter or ordinance, said office shall serve as the district medical examiner who would otherwise be appointed under this chapter.

GEORGIA

TITLE: A.) County coroner (Ga. Code § 21-101); B.) Medical examiner (Ga. Code § 21-203(2)).

TERM: A.) Four years (Ga. Code § 21-101); B.) No statutory indication.

APPOINTMENT: A.) Elected (Ga. Code § 21-101); B.) Elected by the director of the State Crime Laboratory, director of the Department of Public Health (Ga. Code § 21-203(2)).

QUALIFICATIONS: A.) No statutory indication; B.) Licensed physician or pathologist (Ga. Code § 21-203(2)).

SUBJECT DEATHS: When any person shall die as a result of violence or suicide or casualty or suddenly when in apparent health, or when unattended by a physician, or within 24 hours after admission to the hospital without having regained consciousness, or in any suspicious or unusual manner (Ga. Code § 21-205(1)).[1]

PROCEDURE: Upon receipt of notice, the coroner shall immediately take charge of the dead body and it shall be his duty to summon a medical examiner and proper peace officer. They shall together make inquiries regarding the cause and manner of death, and the medical examiner shall perform a post mortem examination and/or autopsy reducing his findings to writing and filing them with the director of the State Crime Laboratory (Ga. Code § 21-209). It shall be in the sole discretion of the medical examiner to determine whether or not an autopsy or dissection is required, provided that he give due consideration to the opinions of the peace officer in charge regarding the requirements of the accepted investigation techniques and the rules of evidence applicable thereto (Ga. Code § 21-203(3)). Medical examiner and peace officer in charge shall file in triplicate, reports of each post mortem examination and/or autopsy and investigation with the director of the State Crime Laboratory. In cases where reports indicate suspicion or foul play, medical examiner and police officer shall transmit with their reports all specified examples to the State Crime Laboratory (Ga. Code § 21-204).

ACCESSIBILITY: Death certificates - Ga. Code Tit. 88, § 1715: death certificates are filed with the local registrar. Generally, disclosure of vital records is prohibited, unless authorized by regulations promulgated by the Department of Public Health. Ga. Code Tit. 88, § 1723. Guidelines are given for giving copies of vital records in accordance with the regulations. Ga. Code Tit. 88, § 1724. Rules of Department of Human Resources, Ch. 290-1-2.
Autopsy reports - Ga. Code Tit. 21, § 204: medical examiner and peace officer file a report in triplicate with the director of the State Crime Laboratory. Medical examiner, peace officer, and clerk of the Superior Court of the county end up with reports. Ga. Code Tit. 40, § 2701 provides that all State, county and municipal records are required to be open for personal inspection by any citizen of Georgia at reasonable time and place.[2]

INFANT DEATH: No statutory indication.

HAWAII

TITLE: A.) County coroner. Ha. Rev. Stat. § 841-1; A1.) Coroner physicians. Ha. Rev. Stat. § 848-18.

TERM: A.) Honolulu indeterminate; A1.) Two years.

APPOINTMENT: Chief of police ex officio (appointed by police commission, Ha. Rev. Stat. § 52-62). Elected for a two year term on county basis within the counties of Hawaii, Maui, and Kauai. Ha. Rev. Stat. §§ 62-1, 62-4.
Independent medical examiner: Honolulu. Coroner physician: by coroner. Ha. Rev. Stat. § 841-8.

QUALIFICATIONS: Chief of police: counties of Hawaii, Maui, and Kauai; Medical examiner: Honolulu. Coroner physician: experienced or qualified government physician (meaning employed by the State or any of its political subdivisions).

SUBJECT DEATHS: As a result of violence or as the result of any accident by suicide, or suddenly when in apparent health, or when unattended by a physician, or when in prison or in a suspicious or unusual manner, or within 24 hours after admission to a hospital or institution. Ha. Rev. Stat. § 841-3. See Ha. Rev. Stat. § 338-9 for reporting of deaths caused by other than natural causes to the coroner.

PROCEDURE: Upon notice, coroner must inquire into and make a complete investigation of cause of death. Ha. Rev. Stat. § 841-3. Coroner, coroner's physician, prosecuting attorney, or chief of police of Honolulu, have discretion to order autopsy when it is necessary, in the interest of public safety or welfare.
County concerned pays the cost. Ha. Rev. Stat. § 841-18. Facilities of the laboratories of the State Department of Health are available to coroner's physician. Ha. Rev. Stat. § 841-18.

ACCESSIBILITY: Death certificate - Public Health Regulations, Ch. 8B, § 2.5: death certificates are not available for or open to public inspection, except as provided by law, or by regulations

promulgated by the Department of Health. Ha. Rev. Stat. § 338-18. Such regulations provide access to next of kin, among others.
Reports - Ha. Rev. Stat. § 841-9: upon the application by other than governmental agencies for a certified copy of any coroner's report and inquest, the coroner may collect $2 for preparation and issuance.

INFANT DEATH: No statutory indication.

NOTE: Honolulu has an independent medical examiner system.

IDAHO

TITLE: County coroner (Id. Code § 34-622).

TERM: Two years (Id. Code § 34-622).

APPOINTMENT: Elected (Id. Code § 34-622).

QUALIFICATIONS: Twenty-one years old at the time of election, U.S. citizen, a resident of the county for at least one year prior to the election (Id. Code § 34-622).

SUBJECT DEATHS: When a person has been killed or has committed suicide, or has suddenly died under such circumstances as to afford a reasonable ground to suspect that his death was occasioned by the act of another by criminal means. Id. Code § 19-4301.
When no physician was in attendance during the last illness of the deceased or when the physician in attendance is physically unable to supply the data, or when the death was from other than natural causes. Id. Code § 39-258.[3]

PROCEDURE: When informed of a subject death, coroner must proceed to place where body lies, summon a jury, and inquire into the cause of death.[4] He may issue subpoenas for witnesses and may summon a surgeon or physician to inspect the body and give a professional opinion as to the cause of death.[5] Id. Code §§ 19-4303, 19-4304.

ACCESSIBILITY: Death certificate - Id. Code § 39-258: certificate is obtained and filed by person responsible for internment or removal of the body from the district, and is filed with the local registrar.[6] Id. Code § 39-253: there is a fee for the making of certified copies of records. Id. Code § 39-264 provides for access to certificates by immediate family only.
Reports - Id. Code § 19-4306: coroner must file findings of inquests in writing and file the report with the clerk of the district court of the county.[7]

INFANT DEATH: No statutory indication.[8]

ILLINOIS

TITLE: County coroner. Il. Rev. Stat. Const. 1970, Art. 7, § 4(c).

TERM: Four years. Il. Rev. Stat. Const. 1970, Art. 7, § 4(c).

APPOINTMENT: Elected in each county. Il. Rev. Stat. Const. 1970, Art. 7, § 4(c). See NOTE below.

QUALIFICATIONS: No statutory indication.

SUBJECT DEATHS: A sudden or violent death whether apparently suicidal, homicidal, or accidental, including but not limited to deaths apparently caused or contributed to by thermal, traumatic, chemical, electrical or radiational injury, or a complication of any of them; or by drowning or suffocation; a maternal or fetal death due to abortion or any death due to a sex crime against nature; a death where the circumstances are suspicious, obscure, or mysterious, or where, in the written opinion of the attending physician, the cause of death is not determined; a death where addiction to alcohol or to any drug may have been a contributory cause; or a death where the decedent was not attended by a licensed physician. Il. Rev. Stat. Ch.31, § 10.

PROCEDURE: Coroner must go to the place where the dead body is, take charge of it, and make a preliminary investigation. Inquests are required for apparent suicide, homicide, or accident. Autopsy must be performed where in the opinion of the examining physician or coroner only it can ascertain the cause of death. In such cases it is declared that the public interest requires performance of an autopsy. Coroner must direct licensed physician, preferably one having special training in pathology to perform medical examination or autopsy, if required. Il. Rev. Stat. Ch. 31, §§ 10, 10.1., 10.2.
Costs are paid for out of the general funds of the county in which the death occurred.

ACCESSIBILITY: Death certificate - Il. Rev. Stat. Ch. 111 1/2, § 73-74: Under Illinois law, access to vital records and indexes to vital records, is limited to the custodian and his employees. Certified copies of death certificates are required to be issued, upon specific written request, to any person, or his duly authorized agent, having a personal

or property right interest in the record. Il. Rev. Stat. Ch. 111 1/2, § 73-25.
Reports - Il. Rev. Stat. Ch. 111 1/2, §§ 73-74, 73-25: Apparently, access to autopsy reports can be gained through the application of this jurisdiction's "public access" statute, which provides same to all records maintained by public agencies. Il. Rev. Stat. Ch. 31, § 10.1 provides that all reports are maintained by the coroner and Department of public Health.

INFANT DEATH: No statutory indication.

NOTE: Illinois Constitution of 1970 granted home rule powers. Coroners may be elected, appointed, or the office even eliminated by county-wide referendum. Il. Rev. Stat. Ch. 31, § 1 (1974 Amendment). Thus, the existence or structure of each independent county based coroner's office required county by county survey.

INDIANA

TITLE: County coroners. Ind. Code § 17-3-17-0.1.

TERM: Four years. Ind. Code § 17-3-17-0.1.

QUALIFICATIONS: An elector of the county in residency of one year preceding the election. Const. of Ind., Art. 6, § 4.

SUBJECT DEATHS: Death of any person from violence or by casualty or by death when in apparent good health, or when found dead, or when found in any suspicious, unusual or unnatural manner. Ind. Code § 17-3-17-4.

PROCEDURE: As to how and in what manner the death arose:
whenever any coroner deems it necessary in the discharge of his duties to have an autopsy performed, he shall employ a physician possessing the education and training that meets the standards established by the American Board of Pathology for certification or a physician holding an unlimited licensed to practice medicine in the State of Indiana. Physician gets paid from the county treasury. Ind. Code § 17-3-17-4(c). Power of subpoena. Ind. Code § 17-3-17-5.
Coroner must notify a police agency having jurisdiction to assist him in the investigation and shall cause a medical investigation to determine the cause of death. Ind. Code § 17-3-17-4.

ACCESSIBILITY: Death certificate - Ind. Code § 17-3-17-4(a): coroner files death certificate with local health officer. Ind. Code § 5-14-1-3 allows access to public records.
Reports - Ind. Code § 17-3-17-8: written report of the investigation must be filed with the office of the clerk of the circuit court of the county. Ind. Code § 5-14-1-3 allows access to public records.

INFANT DEATH: No statutory indication.

NOTE: In NOTES TO DECISIONS, under Ind. Code § 17-3-17-5, Sandy v. Board of County Commissioners, coroners can order autopsies to be held only when deaths are supposed to be caused by violence or casualty. 87 N.E. 131 (1909).
Ind. Code § 17-3-17-16 requires coroners to attend meetings of the commission of forensic sciences when requested.

IOWA

TITLE: A.) State medical examiner. Iowa Code § 749A.5 (see NOTE); B.) County medical examiner. Iowa Code § 339.1.

TERM: A.) State medical examiner shall serve at the pleasure of the Governor; B.) Two years. Iowa Code § 339.1.

APPOINTMENT; A.) By the Governor. Iowa Code § 749A.5; B.) By county board of supervisors from list submitted by county medical and osteopathic societies.

QUALIFICATIONS: A.) MD, licensed in Iowa, possess special knowledge in forensic pathology. Iowa Code § 749A.5; B.) Licensed as MD and surgeon. Iowa Code § 339.2.

SUBJECT DEATHS: Violent deaths, including homicidal, suicidal, or accidental deaths; deaths caused by thermal, chemical, electrical, or radiational injury, deaths caused by criminal abortion, including those self-induced or by rape or carnal knowledge or crimes against nature; deaths related to disease thought to be virulent or contagious which might constitute a public health hazard; deaths that have occurred unexpectedly, or from unexplained causes; deaths of persons confined in a prison, jail, or correctional institution; deaths of persons where a physician was not in attendance at any time at least 36 hours preceding death; deaths of persons where the bodies are not claimed by relatives or friends; deaths of all persons wherein the identity is unknown. Iowa Code § 339.6 (see NOTE).

PROCEDURE: County medical examiner

reports each case of a subject death to the State medical examiner and conducts an investigation. Chief medical examiner exercises his own discretion in determining whether the public interest requires an autopsy, except when the State medical examiner or county attorney requests and autopsy. Iowa Code § 339.10.

Facilities required by county medical examiner are provided by the county board of supervisors, subject to prior approval by the State medical examiner. Iowa Code § 339.3.

Governor shall provide for the transfer of any appropriate laboratory facilities, equipment, and technical personnel of the State to the State criminalistics laboratory. Iowa Code § 749A.8.

ACCESSIBILITY: Death certificates - Iowa Code § 144.43: this covers accessibility to records, which includes death certificates. Vital Statistics Regulations 43(1) provides for inspection by those persons with a direct and tangible interest in the record's contents (defined to include the next of kin).

Reports - Iowa Code §§ 339.4, 339.8: both State medical examiner and county attorneys receive reports from chief medical examiner. Iowa Code § 68A.2 apparently provides access to such reports as public records of public agencies.

INFANT DEATH: No statutory indication.

NOTE: Subject deaths are part of a broad category of deaths in the public interest which require investigation under Iowa Code § 339.6. State medical examiner mandated to promulgate rules under Iowa Code § 749A.6.

KANSAS

TITLE: District coroner. Kan. Stat. Ann. § 19-1026.

TERM: Four years. Kan. Stat. Ann. § 19-1026.

APPOINTMENT: Appointed in each judicial district by the district judge(s) who select from a list supplied by the local medical society of the district, or appoint someone who is qualified. Kan. Stat. Ann. § 19-1026.

QUALIFICATIONS: Resident of the State licensed to practice medicine and surgery, or resident of a military or other federal enclave within the State and licensed to practice medicine and surgery therein. Kan. Stat. Ann. § 19-1026.

SUBJECT DEATHS: As a result of violence, caused by unlawful means or by suicide, or by casualty, or suddenly when the decedent was not regularly attended by a licensed physician, or in any suspicious or unusual manner, or when the determination of the cause of death is held to be in the public interest. Kan. Stat. Ann. § 19-1031.

PROCEDURE: Coroner must be notified of subject deaths, and takes charge of the body for an investigation of the cause of death. If coroner deems autopsy required in the public interest, or the county attorney requests an autopsy in writing, such autopsy shall be performed by the coroner, or a pathologist or competent physician shall be paid by the board of county commissioners of the county in which the death occurred. Kan. Stat. Ann. §§ 19-1032, 19-1033.

ACCESSIBILITY: Death certificates - Kan. Stat. Ann. § 65-2412: death certificates are filed with local registrar. The State Registrar shall not permit inspection of vital records or issue a certified copy unless he is satisfied that the applicant therefor has a direct interest in the matter recorded and that the information contained therein is recorded for the determination of personal or property rights. Kan. Stat. Ann. § 65-2422(c).

Reports - Kan. Stat. Ann. §§ 19-1032, 19-1033: coroner files initial investigation report with county clerk, while autopsy report is filed with coroner. Kan. Stat. Ann. § 45-201 provides for open inspection of records maintained by public agencies.

INFANT DEATH: No statutory indication.

NOTE: Kan. Stat. Ann. § 65-153 - Division of Health, Department of Health and Environment to issue educational literature on the study of the causes of infant mortality. Kan. Stat. Ann. § 65-2893 - consent to autopsy outside of subject death area. Kan. Stat. Ann. § 19-1026 provides for deputy coroners, appointed by the district coroner with the approval of the district judge(s) and having the same qualifications, duties, and authority as the district coroner.

KENTUCKY

TITLE: A.) County coroner. Ky. Rev. Stat. Ann. Const., § 99; B.) Medical examiner section (Department of Human Resources: county or district medical examiner, Ky. Rev. Stat. Ann. §§ 72.210, 72.240).

TERM: A.) Four years. Ky. Rev. Stat. Ann. Const., § 99; B.) No statutory indication.

APPOINTMENT: A.) Elected. Ky. Rev. Stat. Ann. Const., § 99; B.) Appointed by the Department of Human Resources. Ky. Rev. Stat. Ann. § 72.240.

QUALIFICATIONS: A.) Twenty four years of age, citizen of Kentucky, resident of county one year before election, Ky. Rev. Stat. Ann. Const., § 100; B.) Physicians licensed in Kentucky, qualified coroners, or county health officers. Ky. Rev. Stat. Ann. §§ 72.240, 72.265.

SUBJECT DEATHS: Any person slain, drowned, or otherwise suddenly killed, or whose death occurred from unnatural causes without the attendance of a physician. (See Opinion of the Attorney General in 1975 Supplement that coroner should only be called in when the circumstances indicate other than natural causes.) Ky. Rev. Stat. Ann. § 72.020, 72.030.

PROCEDURE: The coroner, upon the request by any responsible citizen or if he has reason to believe the death of a human being within his county was caused by crime, suicide, drowning, or other sudden cause, or death occurs without the attendance of a physician within a period of thirty-six hours prior to death, he shall investigate and hold an inquest in the county where death occurs. Coroner must investigate and certify the cause of death. The coroner may employ any competent physician or surgeon to perform an autopsy, if in the opinion of the coroner such a post mortem examination is necessary. Costs under this procedure are generally paid by the county, but see Ky. Rev. Stat. Ann. § 72.290. At the request of the coroner, the county or district medical examiner shall assist in the investigation of deaths. The Department of Human Resources may provide or contract for laboratory facilities for post mortem examinations and autopsies. All assistance provided by the Department of Human Resources is paid for by them within budgetary limitations. Ky. Rev. Stat. Ann. §§ 72.030, 72.070. See Opinion of the Attorney General, Ky. Rev. Stat. Ann. § 71-318. Apparently Medical Examiner Service Program has no independent authority to order autopsies or investigate deaths. See Ky. Rev. Stat. Ann. § 72.220.

ACCESSIBILITY: Death certificate - certificate is filed with the local registrar. Ky. Rev. Stat. Ann. §§ 213.090, 213.100. Copy of death certificate may be furnished to an applicant who has a direct, tangible, and legal interest in the information or record requested. Ky. Rev. Stat. Ann. § 213.090.
Reports - In accordance with House Bill No. 138, the "Sunshine Law", codified in Ky. Rev. Stat. Ann. § 61.870, et seq., all books, papers, maps, photographs, cards, tapes, discs, recordings or other documentary materials regardless of physical form or characteristics which are prepared, owned, used, in the possession of or retained by a public agency shall be public records. Therefore, the Medical Examiner autopsy reports would be accessible to the public and the next of kin. Records of law enforcement agencies or agencies involved in administrative adjudication that were compiled in the process of detecting and investigating informants not otherwise known or by premature release of information to be used in a prospective law enforcement action or administrative adjudication shall not be open to the public.
At this time there are no specific rules or regulations that have been promulgated relative to autopsy reports by next of kin.

INFANT DEATH: No statutory indication.

NOTE: See Ky. Rev. Stat. Ann. § 72.210 for dichotomy between medical examiner and coroner systems. Ky. Rev. Stat. Ann. § 72.225. The secretary of human resources shall adopt rules and regulations to carry out the provisions of the medical examiner service program. Ky. Rev. Stat. Ann. § 72.072 (1975 Supplement) - County judge or city judge in cities of the first or second class may order autopsies. No restrictions on post mortem examinations set forth in Ky. Rev. Stat. Ann. § 72.075.

LOUISIANA

TITLE: Parish coroner. La. Code Civ. Pro. Ann. Art. 5, § 29, Const. of 1975. Parish coroner may also act as either or both ex officio parish physician and parish health officer. La. Rev. Stat. Ann. § 33:1556.

TERM: Orleans Parish - four years. La. Rev. Stat. Ann. § 33:1621.1. All others elected. La. Code Civ. Pro. Ann. Const. 1975, Art. 5, § 29.

QUALIFICATIONS: Shall be a licensed physician and possess the other qualifications and perform the duties as provided by law, except where no licensed physician will accept the office. La. Code Civ. Pro. Ann. Const. 1975, Art. 5, § 29.

SUBJECT DEATHS: Suspicious, unexpected, unusual deaths, sudden deaths, violent deaths, deaths due to unknown or obscure causes or in any unusual manner, bodies found dead, deaths without attending physician within thirty-six hours prior to death, cases of suspected abortion whether self-induced or otherwise, deaths due to suspected suicide or homicide, deaths in which poison is suspected, deaths from natural causes occurring in a hospital of under twenty-four hours admission, deaths following an injury or accident, either old or recent, deaths due to drowning, hanging, burns, electrocution, gunshot wounds, stabs or cutting, lightning, starvation, radiation, exposure, alcoholism, addiction, tetanus, and from strangulation, suffocation, or smothering, deaths due to trauma from whatever cause, premature births, stillborn deaths, deaths due to criminal means or by casualty, deaths in prison or while serving a sentence, deaths due to a virulent contagious disease that might be caused by or cause a public hazard, and all cases of alleged rape, simple and aggravated, carnal knowledge and crimes against nature. La. Rev. Stat. Ann. § 33:1561.

PROCEDURE: It shall be the duty of the coroner to view the body or make an investigation of all subject deaths. The coroner is authorized to perform or cause to be performed by a competent physician, an autopsy in any case in his discretion. Coroner may hold any dead body for any length of time he deems necessary and may retain specimens of organs. La. Rev. Stat. Ann. § 33:1561. Except for salaried coroners, coroners who conduct investigations themselves are paid $20 for every investigation, $20 for viewing bodies, and $100-$150 for performing autopsies (outside Orleans, Jefferson and Ascension parishes), La. Rev. Stat. Ann. § 33:1558(A), or $10 for every investigation, $10 for viewing bodies, and $25-$50 for performing autopsies (in Jefferon and Ascension parishes) La. Rev. Stat. Ann. § 33:1558(B). Any expert used by the coroner in his investigation is to be paid by the city or parish involved, at a compensation agreed upon by the coroner and the parish governing body (police jury) La. Rev. Stat. Ann. § 33:1557.1. The parish, city, or town within which the investigation or autopsy is held shall pay the expense thereof with the coroner's fees upon an account of expenses from the coroner. La. Rev. Stat. Ann. § 33:1563. Forensic laboratories are set up in two forms: 1) by congressional district, with the parishes contributing on a pro rata basis. La. Rev. Stat. Ann. § 33:1559.1, or 2) by parish or city. La. Rev. Stat. Ann. § 33:1559.2.

ACCESSIBILITY: Death certificate - A newly enacted, and yet uncodified, vital statistics law, Act No. 352, Senate Bill No. 98, completely revamps Lousiana's previous statutory scheme. Relative to inspection, § 39 of that act defines eligibility regarding disclosure and bases such determination on "direct interest" (ascendant or descendant relationship or hier at law). Reports - La. Rev. Stat. Ann. § 33:1565: book of autopsies must be made open to the public at the office of the clerk of the parish court. A constitutional mandate of public accessibility is expressed in the Constitution of 1975, Art. 12, § 3.

INFANT DEATH: On death certificates of infants under one year old, Sudden Infant Death Syndrome must be listed as the cause of death where the findings so warrant. Also, the director of the parish health unit must be notified of the SIDS death. La. Rev. Stat. Ann. § 33:1561.3. Upon notification, the director of the parish health unit must notify the persons who had custody and control of the infant, tell them that SIDS was the cause of death, and explain SIDS to them. La. Rev. Stat. Ann. § 40:56.

MAINE

TITLE: A.) Chief Medical Examiner Me. Rev. Stat. Ann. § 22:3022; B.) Medical Examiners Me. Rev. Stat. Ann. § 22:3023.

TERM: A.) Seven years; B.) Shall serve at the pleasure of the Chief Medical Examiner. Me. Rev. Stat. Ann. § 22:3023.

APPOINTMENT: A.) Appointed by the Governor Me. Rev. Stat. Ann. § 22:3022. See NOTE below; B.) Appointed by the Chief Medical Examiner Me. Rev. Stat. Ann. § 22:3022.

QUALIFICATIONS: A.) MD or doctor of osteopathy, licensed to practice in Maine, and certified in forensic pathology by the American Board of Pathology. Me. Rev. Stat. Ann. § 22:3022. B.) MD licensed in and resident of Maine.

SUBJECT DEATHS: Death by violence, or by the action of chemical, thermal, or electrical agents, or following abortion, or suddenly when not disabled by recognizable disease or unexplained or unattended deaths. Me. Rev. Stat. Ann. § 22:3025.

PROCEDURE: Generally, a local official is notified, and then a law enforcement official from either the Attorney General's office, or county attorney's office. Then the medical examiner is brought in. Me. Rev. Stat. Ann. § 22:3025. When a person dies without the attendance of a physician the person finding the body, the funeral director, or the physician called to examine the dead body must notify the medical examiner. Me. Rev. Stat. Ann. § 22:3026. The medical examiner shall then take charge of the body, make an inquiry into the manner and cause of death, reduce the findings to writing, and send a report to the office of the Chief Medical Examiner. Me. Rev. Stat. Ann. § 22:3026. All costs are paid by the State. Me. Rev. Stat. Ann. § 22:3024. If in the opinion of the medical examiner, Chief Medical Examiner, county attorney, or Attorney General, it is advisable and in the public interest that an autopsy be made, such autopsy shall be made by the Chief Medical Examiner or a pathologist designated by the Chief Medical Examiner. Me. Rev. Stat. Ann. § 22:3028. All State agency labs, and their professional staffs, shall be made available to the Chief Medical Examiner with the cooperation of the head of the agency involved. Me. Rev. Stat. Ann. § 22:3021.

ACCESSIBILITY: Death certificate - Me. Rev. Stat. Ann. Tit. 22, § 2842(3): the medical examiner must file the death certificate with clerk of the municipality if the death occurs without medical attendance or when inquiry of the cause of death is required by law. Me. Rev. Stat. Ann. Tit. 22, § 2706 provides that the custodians of death certificates, etc., may permit inspection of records or issue copies of certificates or records or any parts thereof when satisfied that the applicant therefor has a direct and legitimate interest in the matter.
Reports - Me. Rev. Stat. Ann. Tit. 22, § 3028: a full record and report of the facts developed by the autopsy and findings of the person making the autopsy shall be filed in the office of the Chief Medical Examiner. A public policy statement concerning the accessibility of public records is made in Me. Rev. Stat. Ann. Tit. 1, § 401, et seq.

INFANT DEATH: When a child under three dies without medical attendance, the medical examiner makes a report to the Chief Medical Examiner within seventy-two hours of the time of death giving the circumstances surrounding death, the findings of an autopsy, or reasons why autopsy was not performed, cause of death as listed on death certificate, and anything else the Chief Medical Examiner may specify. Chief Medical Examiner may cause reports to be forwarded to the Director of Health, Department of Health and Welfare. Me. Rev. Stat. Ann. Tit. 22, § 3026.

NOTE: Me. Rev. Stat. Ann. Tit. 22, § 3032: Chief Medical Examiner may make and enforce rules and regulations to carry out the medical examiner chapter, and these rules must be filed with the Secretary of State's office. Complete directions as to the nature, character, and extent of the investigation, to be made in cases where medical examiners are involved, together with appropriate forms, shall be promulgated by the Chief Medical Examiner by proper rule and regulation.
Constitutional Resolution, 1975, Chapter 4, (Amendment CXXIX) abolished the Executive Council in Maine. Such amendment repealed Maine Rev. Stat. Ann. Const., Art. V, Part 2, § 1 the effect, in terms of its relevance to death investigation, being that appointment of the Chief Medical Examiner is now made solely by the Governor.

MARYLAND

TITLE: Chief Medical Examiner, Assistant Deputy Chief Medical Examiner, and four assistant medical examiners.[1] Md. Ann. Code Art. 22, § 2. Deputy Medical Examiners.[2] Md. Ann. Code Art. 22, § 3.

TERM: No statutory indication.[3]

APPOINTMENT: Everyone appointed by the commission at the head of the Department of Post Mortem Examiners. Md. Ann. Code Art. 22, §§ 2, 3. See composition of the commission in NOTE, below.

QUALIFICATIONS: The Medical Examiners shall be licensed doctors of medicine, and shall have had at least two years post-graduate training in pathology. Md. Ann. Code, Art. 22, § 2.

SUBJECT DEATHS: As a result of violence, or by suicide, or by casualty, or suddenly when in apparent health, or when unattended by a physician or in any suspicious or unusual manner. Md. Ann. Code Art. 22, § 6.

PROCEDURE: Chief Medical Examiner, assistant Medical Examiner, or Deputy Medical Examiner, and State's attorney of Baltimore City or county attorney are notified. Medical Examiner takes charge of the body and fully investigates the medical causes of death, reducing his findings to writing, and filing such report in his office. Md. Ann. Code Art. 22, § 6. If Medical Examiner feels autopsy necessary, the Chief Medical Examiner, assistant Medical Examiner, or competent pathologist performs it. Report of findings filed in the Chief Medical Examiner's office or in the office of the Deputy Medical Examiner. The Deputy Medical Examiner may ask the

Chief Medical Examiner or assistant Medical Examiner to do the autopsy and the Chief Medical Examiner or assistant must do so, unless competent pathologist is authorized by the Chief Medical Examiner. Revenues of the Racing Commission used to pay for full time medical examiners and the pathologist's work, and also for the expenses of transferring the body. Md. Ann. Code Art. 22, § 7. Commission must provide lab facilities, or arrange for their use. Md. Ann. Code Art. 22, § 5.

ACCESSIBILITY: Death certificate - Md. Ann. Code Art. 43, § 20: if the medical examiner takes charge of the body, he must make out the death certificate and file it with the State Board of Health and Mental Hygiene. It is unlawful to permit inspection of, disclosure of, or copying of information in vital records. Md. Ann. Code Art. 43, § 27. Any property authorized person may get a certified copy or an abridged copy of a death certificate. Md. Ann. Code Art. 43, § 25; such phrase is administratively defined as family, executor, or lawyer.
Reports - Md. Ann. Code Art. 22, § 8: Chief Medical Examiner and Deputy Medical Examiners maintain records in their offices. Md. Ann. Code Art. 76A, §§ 1-6 establishes the statutory parameters of public information: Md. Ann. Code Art. 76A, § 3C(1) excludes coroner's autopsy reports from those records which may be legitimately denied at an applicant.

INFANT DEATH: No statutory indication.

NOTE: Md. Ann. Code Art. 22, § 1: the commission: 1 pathologist each from the University of Maryland and John Hopkins University, representative from Department of Health selected by the Secretary of Health and Mental Hygiene, commissioner of Health of Baltimore City and Superintendent of State Police. No compensation. Department of Post Mortem Examiners is part of the Department of Health and Mental Hygiene. Deputy Medical Examiners may deputize medical doctors in their county when necessary. Md. Ann. Code Art. 22, § 3. Commission shall adopt and promulgate rules and regulations. Md. Ann. Code Art. 22, § 4. Chief Medical Examiner's office includes four residents in training in forensic pathology. Md. Ann. Code Art. 22, § 2.

Footnotes: [1] Full time positions.
[2] Part time positions (fee per death investigation basis).
[3] The Chief Medical Examiner serves at the pleasure of the commission at the head of the Department of Post Mortem Examiners and is required to retire at seventy.

MASSACHUSETTS

TITLE: Medical Examiners and Associate Medical Examiners. Ma. Gen. Laws Ann. Ch. 38, § 1. County and district boundaries are set up by Ma. Gen. Laws Ann. Ch. 38, § 1.

TERM: Seven years. Ma. Gen. Laws Ann. Ch. 38, § 1. Const., Art. 9, Part 2, Ch. 2, § 1.

APPOINTMENT: Appointed by the Governor, with the advice and consent of the council. Ma. Gen. Laws Ann. Ch. 38, § 1.

QUALIFICATIONS: Able and discreet men, learned in the science of medicine. Ma. Gen. Laws Ann. Ch. 38, § 1.

SUBJECT DEATHS: By violence or by the action of chemical, thermal, or electrical agents or following abortion, or from diseases resulting from injury or infection relating to occupation, or suddenly when not disabled by recognizable disease, or from malnutrition, or from sexual abuse, or a child who is determined to be physically dependent upon an addictive drug at birth, or when any person is found dead. Ma. Gen. Laws Ann. Ch. 38, § 6.

PROCEDURE: Medical examiner must be notified, and if, after inquiry as to the cause and circumstances of death, is of the opinion that violence or unnatural causes are involved, shall take charge of the body. If after viewing the body and personally inquiring into the cause of death, the medical examiner feels further examination is necessary, he shall contact the local district attorney. After district attorney has viewed the body or expressed no desire to do so, medical examiner on his own may conduct an autopsy, unless requested by the district attorney or Attorney General, making autopsy mandatory. Two witnesses (discreet persons) must be present, and the medical examiner may employ the services of pathologists, physicians, etc., as he deems necessary. Medical examiner shall record, or cause to be recorded, all of his findings. Ma. Gen. Laws Ann. Ch. 38, § 6. In Suffolk County, facilities are provided for autopsies by the county, with the approval of the mayor of Boston, Ma. Gen. Laws Ann. Ch. 38, § 5. Facilities for medical examiners in other counties are not provided for.

ACCESSIBILITY: Death certificate - Ma. Gen. Laws Ann. Ch. 38, § 7: medical examiner must file death certificate

with town clerk or registrar, and where applicable with the Department of Industrial Accidents or the Registrar of Motor Vehicles. Every person having custody of any public records is required, at reasonable times and without unreasonable delay, to permit such records to be inspected and examined by any person, under his supervision, and to furnish one copy of any record on payment of a reasonable fee. Ma. Gen. Laws Ann. Ch. 66 and 66A.
Reports - Ma. Gen. Laws Ann. Ch. 38, § 7: medical examiner must file a report with the district attorney of his district. Public inspection of records is provided for in Ma. Gen. Laws Ann. Ch. 66, § 10.

INFANT DEATH: Medical examiner to be notified of the death of any child under age two. Autopsy will be performed with parental consent after parents are notified that autopsy can be done. Cost is borne by the commonwealth. Parents or legal guardians must be notified of the results of the autopsy. Ma. Gen. Laws Ann. Ch. 38, § 6C.

NOTE: Ma. Gen. Laws Ann. Ch. 38, § 1 sets up appointment of medical examiners and associates. Ma. Gen. Laws Ann. Ch. 38, § 2. Associate medical examiners may cross district lines when necessary. Ma. Gen. Laws Ann. Ch. 38, § 1A provides for a forensic dental examiner. Ma. Gen. Laws Ann. Ch 38, § 8ff deals with inquests, and was not analyzed for purposes of this effort. Ma. Gen. Laws Ann. Ch. 38, § 16 - Medical examiners must view bodies to be cremated.

MICHIGAN

TITLE: County Medical Examiners and Deputy Medical Examiners. Mich. Comp. Laws Ann. § 52.201.

TERM: Four years. Mich. Comp. Laws Ann. § 52.201.

APPOINTMENT: Medical examiners and deputy medical examiners are appointed by the county board of supervisors. Mich. Comp. Laws Ann. § 52.201. Mich. Comp. Laws Ann. § 52.201 unless there is a county civil service system, which allows medical examiners to appoint deputies. Mich. Comp. Laws Ann. § 52.201d.

QUALIFICATIONS: County medical examiners must be physicians licensed to practice in the State and residents of the county for which they are appointed or a neighboring county. Mich. Comp. Laws Ann. § 52.201. In counties of 50,000 or more, deputy medical examiners must be Michigan licensed physicians. In counties of less than 50,000, deputy medical examiners need only be physicians, dentists, registered nurses, or morticians licensed to practice in the State. Mich. Comp. Laws Ann. § 52.201a. Deputies must also be residents of the county from which they are appointed. Mich. Comp. Laws Ann. § 52.201b.

SUBJECT DEATHS: Deaths by violence; unexpected death; death without medical attendance during the forty-eight hours prior to the hour of death unless the attending physician, if any, is able to determine accurately the cause of death; death as the result of an abortion, whether self-induced or otherwise. Also deaths of any prisoner in any county or city jail. Mich. Comp. Laws Ann. §§ 52.202, 52.203.

PROCEDURE: County medical examiner or his deputy must be notified of subject deaths. Mich. Comp. Laws Ann. §§ 52.202, 52.203. After notification, the county medical examiner, or his designated representative (may be a law enforcement officer) takes charge of the body, and inquires into the manner and cause of death. If further investigation is required, the body is taken to the public morgue (or a private one if no public morgue exists). The county medical examiner may then perform or direct to be performed an autopsy, with the findings reduced to writing. The county medical examiner may conduct an autopsy whenever he determines that an autopsy reasonably appears to be required pursuant to the provisions of law. Mich. Comp. Laws Ann. § 52.205. Nothing indicated as to facilities or cost.

ACCESSIBILITY: Death certificate - Mich. Comp. Laws Ann. § 326.9: funeral director or person having charge of a corpse shall file the certificate of death with the registrar of the district. State director of public health, upon a request accompanied by a fee, shall issue certified copies of death certificates. Mich. Comp. Laws Ann. § 326.9.
Reports - Mich. Comp. Laws Ann. § 750.492: this sets forth the right of public accessibility to records without excluding medical autopsy reports. Autopsy findings are to be put in writing by the medical examiner, Mich. Comp. Laws Ann. § 52.205. Medical examiner must notify next of kin of the death. Mich. Comp. Laws Ann. § 52.205.

INFANT DEATH: Medical examiner must be notified of sudden infant death of infants under two years, whereupon he is to notify the parents that they may have an autopsy performed with costs borne by the State. After autopsy, they must be notified of the results. State director of health determines the propriety of all expense claims for this purpose.[9] Mich. Comp. Laws Ann. § 52.205a.

NOTE: County health officers may be designated as medical examiners. Mich. Comp. Laws Ann. § 52.213c. County medical examiner sets up rules of his office, and may delegate his duties to a qualified deputy. Mich. Comp. Laws Ann. § 52.201c.

MINNESOTA

TITLE: A.) County coroner. May appoint deputies. Minn. Rev. Stat. Ann. § 390.05 (Hennepin County excluded)

TERM: Four years. Minn. Rev. Stat. Ann. §§ 382.01, 390.005.

APPOINTMENT: Elected at general election, Minn. Rev. Stat. Ann. §§ 382.01, 390.225, or appointed by board of county commissioners in counties so choosing. Minn. Rev. Stat. Ann. § 390.005.

QUALIFICATIONS: Coroner must be a person who has had courses in pharmacology, surgery, pathology, toxicology, and physiology. Minn. Rev. Stat. § 390.005.

SUBJECT DEATHS: 1) Violent deaths, whether apparently homicidal, suicidal, or accidental, including but not limited to deaths due to thermal, chemical, electrical, or radiational injury and deaths due to criminal abortion, whether apparently self-induced or not; 2) deaths under unusual or mysterious circumstances; 3) deaths of persons whose bodies are to be cremated, dissected, buried at sea, or otherwise disposed of so as to be thereafter unavailable for examination; deaths of inmates of public institutions who are not hospitalized therein for organic disease and whose deaths are not of any type referred to in 1) or 2). Minn. Rev. Stat. Ann. § 390.11.

PROCEDURE: When in the judgment of the coroner the public interest requires an autopsy, he may conduct an autopsy on bodies coming to their death under 1) and 2) above. On bodies coming to their death under 3) or 4) above, consent of next of kin is required. Minn. Rev. Stat. Ann. § 390.11. Physicians called by the coroner to make autopsies get $25/day and mileage, paid by the county board. Minn. Rev. Stat. Ann. § 357.11. In counties of over 100,000, the county board shall provide and equip a public morgue. Minn. Rev. Stat. Ann. §§ 390.06, 390.07.

ACCESSIBILITY: Death certificate - Minn. Rev. Stat. Ann. § 390.17: if there is no inquest, coroner must file certificate with the clerk of the district court explaining why not. Only the coroner can file the certificate of death in violent or mysterious deaths including homicide. Minn. Rev. Stat. Ann. § 15.17(4) provides that all public records shall be kept easily accessible for convenient use to the public with no express exception of death certificates.
Reports - Minn. Rev. Stat. Ann. § 390.11: coroner shall keep properly indexed records, showing cause and manner of death, and all other relevant information. Minn. Rev. Stat. Ann. § 15.17(4) provides that all public records shall be kept easily accessible for convenient use to the public, with no specific exclusion of autopsy reports.

INFANT DEATH: No statutory indication.

NOTE: Minn. Rev. Stat. Ann. § 357.11(3) mentions coroners or deputies as licensed doctors, surgeons, funeral directors, or embalmers, and the restrictions, or lack of them, on the coroner when he holds one of the other positions concurrently.

TITLE: B.) County medical examiner. Minn. Rev. Stat. Ann. § 390.33 (excluding Hennepin County).

TERM: Permanent. Minn. Rev. Stat. Ann. § 390.33.

APPOINTMENT: Appointed by county board. Minn. Rev. Stat. Ann. § 390.33.

QUALIFICATIONS: Doctor of medicine or osteopathy licensed to practice in the State. Minn. Rev. Stat. Ann. § 390.33.

SUBJECT DEATHS: 1) Violent deaths, whether apparently homicidal, suicidal, or accidental, including but not limited to deaths due to thermal, chemical, electrical or radiational injury, and deaths due to criminal abortion, whether apparently self-induced or not; 2) deaths under unusual or mysterious circumstances; 3) deaths of persons whose bodies are to be cremated, dissected, buried at sea, or otherwise disposed of so as to be thereafter unavailable for examination; 4) deaths of inmates of public institutions, who are not hospitalized therein for organic disease and whose deaths are not of any type referred to in 1) or 2) above. Minn. Rev. Stat. Ann. § 390.32.

PROCEDURE: Attending physician, mortician, or other persons must notify the sheriff of subject deaths. Sheriff must then notify medical examiner and county attorney, and may recommend an inquest or autopsy. In deaths of types 1) or 2) above, the medical examiner may conduct an autospy when in his opinion the public interest requires one. But in type 3) and 4) deaths, consent must be obtained from next of kin for an autopsy. Medical examiner may use medical specialists with the authorization of the probate judge, the county to pay the costs. Minn. Rev. Stat. Ann. § 390.32.

ACCESSIBILITY: Death certificate - Minn. Rev. Stat. Ann. § 390.32: if the county attorney decides not to conduct an inquest, the medical examiner makes and files the death certificate. Minn. Rev. Stat. Ann. § 15.17 is applied here.
Reports - Minn. Rev. Stat. Ann. § 390.32: sheriff must keep detailed records of all deaths investigated.

INFANT DEATH: No statutory indication.

NOTE: It is in the public interest for medical doctors to conduct medical investigations and that is the purpose of the medical examiner chapter. Minn. Rev. Stat. Ann. § 390.31. Medical examiner provisions apply only to those counties in which the county board elects to be bound by them in lieu of any other law relating to coroners. Minn. Rev. Stat. Ann. § 390.35. Counties may keep qualified coroners in lieu of medical examiners. Minn. Rev. Stat. Ann. § 390.34.

(C)

TITLE: Hennepin County Medical Examiner. Session Laws, 1963, Ch. 848, § 1 (uncoded)

TERM: Four years. Session Laws, 1963, Ch. 848, § 1.

APPOINTMENT: Medical Examiner Board (see NOTE) ranks applicant for position of county medical examiner, sends list of top three to board of county commissioners, and they make the appointment. Session Laws, 1963, Ch. 848, § 1.

QUALIFICATIONS: Medical doctor, graduate of medical school recognized by the American Medical Association, and members of good standing in the medical profession. Session Laws, 1963, Ch. 848, § 1.

SUBJECT DEATHS: All violent deaths, including homicidal, suicidal, and accidental; all deaths due to thermal, chemical, electrical or radiational injury, deaths due to criminal abortion, including those self induced, all sudden deaths of persons not disabled by recognizable disease, all deaths of persons to be cremated, and all deaths of persons confined in jails or other public institutions (except hospitals, sanatoriums, and homes for the aged). Session Laws, 1963, Ch. 848, § 4.

PROCEDURE: Attending physician, mortician, or others must notify the county medical examiner. Session Laws, 1963, Ch. 848, § 4. Then, the county medical examiner, or a deputy shall take charge of the body, make inquiry, reduce findings to writing, and file a report in the county medical examiner's office. If criminal act is suspected. the medical examiner must send the report also to the county attorney. Session Laws, 1963, Ch. 848, § 5. If county medical examiner deems it advisable, and in the public interest that an autopsy be performed, or the district court judge orders it, an autopsy shall be performed without unnecessary delay, at the county morgue. Session Laws, 1963, Ch. 848, § 6. County shall make morgue facilities and equipment available to the county medical examiner, and he shall make use of the equipment, personnel, and facilities of the Bureau of Criminal Apprehension, and of the University of Minnesota, and any other hospital or lab facilities available. Session Laws, 1963, Ch. 848, § 3.

ACCESSIBILITY: Death certificate - Minn. Rev. Stat. Ann. § 144.164: funeral director or person in charge of burial to file death certificate with the local registrar. The death records on file with the division of vital statistics, the local registrars, and clerks of the district court are open to inspection, subject to regulations of the board, Minn. Rev. Stat. Ann. § 144.175, and copies shall be furnished. Minn. Rev. Stat. Ann. § 144.168.
Reports - Session Laws, 1963, Ch. 848, § 6: record of autospy findings to be filed in county medical examiner's office. County medical examiner must keep detailed records of every case in his office. The records may be requested by the county attorney, and be competent evidence.[10]

INFANT DEATH: No statutory indication.[11]

NOTE: Chapter 848 only became effective with approval of the majority of Henneping County Board of Commissioners, per §§ 1 and 2. Not clear whether it has actually been accepted. Medical examiner board: dean of class A medical school (or pathology professor), a member of the Minnesota State Association of Clinical Pathologists, and someone designated from its membership. Session Laws 1963, Ch. 848, § 1. County medical examiner may appoint one or more medical doctors as deputies. They serve at his pleasure. Session Laws, 1963, Ch. 848, § 2.

MISSISSIPPI

(A)

TITLE: County coroners (are judicial officers for inquests).

TERM: Four years. Miss. Code Ann. Const., Art. 5, § 135.

APPOINTMENT: The coroner shall be selected in the manner provided by law for each county. Miss. Code Ann. Const., Art. 5, § 138.

QUALIFICATIONS: All qualified electors. Miss. Code Ann. Const., Art. 12, § 250.

SUBJECT DEATHS: Deaths in prison, and all violent, sudden, or casual deaths within the county coroner's jurisdiction. Miss. Code Ann. § 19-21-11.

PROCEDURE: Generally, the coroner must take inquests, as provided for in Miss. Code Ann. § 19-21-11 to § 19-21-33. At the written request of a majority of the jury, the coroner shall cause a surgeon or physician to appear as a witness for a $10 fee. When criminal means are suspected, the county prosecuting attorney or the district attorney may ask, in writing, the coroner to order an autopsy performed by some qualified physician or surgeon. Fee is not to exceed $100, except for pathologists whose fee is not to exceed $200. Miss. Code Ann. § 19-21-29. The costs of all inquests shall be paid by the county. Miss. Code Ann. § 19-21-33.

ACCESSIBILITY: Death certificate - Miss. Code Ann. § 41-57-7: Records of deaths on file in the division of public health statistics are accessible to the public at reasonable times for proper purpose pursuant to rules promulgated by the State Board of Health. The State Registrar may, in his discretion, upon request and payment of a fee, furnish any applicant a certified copy of the record of any death. State Board of Health, Rules and Regulations, Rule # 17.
Reports - the law coroners are quasi-judicial officers whose responsibilities do not include the medico-legal reporting.

INFANT DEATH: No statutory indication.

NOTE: Justice of the Peace may perform the duties of coroner when the coroner is unavailable. Miss. Code Ann. § 19-21-31.

(B)

TITLE: County coroners who are medical doctors. Miss. Code Ann. § 19-21-51.

TERM: Four years. Miss. Code Ann. Const., Art. 5, § 135.

APPOINTMENT: Elected at each general election for county officers. Miss. Code Ann. § 19-21-53.

QUALIFICATIONS: Doctor of medicine. Miss. Code Ann. § 19-21-51.

SUBJECT DEATHS: All sudden, unexplained, violent, unnatural, untimely, or suspected homicidal deaths. Miss. Code Ann. § 19-21-57.

PROCEDURE: Coroner must determine the cause of death. He may take X-rays and conduct scientific tests. Miss. Code Ann. § 19-21-57. By written order of the county prosecuting attorney or the district attorney, or petition by six electors of the county, the coroner may be ordered to conduct an investigation or autopsy. Miss. Code Ann. § 19-21-65. If coroner deems autopsy or post mortem examination necessary, he, in his discretion, may order or perform such an exam. Coroner may use city, county, or city-county morgue lab, and X-ray facilities. No autopsies may be performed in this situation without consent from next of kin. Miss. Code Ann. § 19-21-67. Only a physician licensed in Mississippi may perform an autopsy. Miss. Code Ann. § 41-37-5. Physicians get up to $100, pathologists up to $200, and chemists used can get up to $50. Miss. Code Ann. § 41-37-5. Circuit judge, chancellor, or county judge may order autopsy on motion by county prosecuting attorney or district attorney, and next of kin consent is not required. Miss. Code Ann. § 41-37-9. County health officer may petition for court-ordered autopsy. Miss. Code Ann. § 41-37-23.

ACCESSIBILITY: Death certificate - Miss. Code Ann. § 41-57-7: Records of deaths on file in the division of public health statistics are accessible to the public at reasonable times for proper purpose pursuant to rules promulgated by the State Board of Health. The State Registrar may, in his discretion, upon request and payment of a fee, furnish any applicant a certified copy of the record of any death. State Board of Health, Rules and Regulations, Rule # 17.
Reports - Miss. Code Ann. § 19-21-69: findings of coroner filed with circuit clerk of the county in a confidential file. Access only upon written order of the county judge, circuit judge, or chancery judge of the county where file

is located. Autopsy reports under Miss. Code Ann. § 41-57-9 (above) go to county circuit court. Miss. Code Ann. § 41-57-13. Reports under Miss. Code Ann. § 41-57-23, autopsies go to clerk fo the court, county health officer, and executive officer of State Board of Health.

INFANT DEATH: No statutory indication.

NOTE: Coroner may appoint deputies, and is responsible for paying them. They must also be medical doctors. Miss. Code Ann. § 19-21-59. See Miss. Code Ann. §§ 41-37-1 to 41-37-25 for autopsy provisions supplementary to those found in the coroner provisions.

(C)

TITLE: State medical examiner.

TERM: No statutory indication.

APPOINTMENT: Appointed by the Governor with the advice and consent of the Senate from among nominees submitted jointly by the Mississippi State Medical Association and the Mississippi Association of Pathologists. Miss. Code Ann. § 41-61-3.

QUALIFICATIONS: Physician eligible for a license to practice in Mississippi and certified in forensic pathology by the American Board of Pathology. Miss. Code Ann. § 41-61-5.

SUBJECT DEATHS: a) Violent deaths, whether apparently homicidal, suicidal, or accidental, including but not limited to deaths due to thermal, chemical, electrical, or radiation injury, and deaths due to criminal abortion, whether apparently self-induced or not. b) Sudden deaths not caused by readily diagnosed and recognizable disease. c) Deaths occurring under suspicious circumstances. d) Deaths of inmates of public institutions who are not hospitalized therein for organic disease or mental illness. e) Deaths related to disease thought to be of a contagious hazard to the public health. Miss. Code Ann. § 41-61-9.

PROCEDURE: State medical examiner authorized to investigate or cause to be investigated subject deaths. Miss. Code Ann. § 41-61-9. If State medical examiner determines that it is advisable and in the public interest for a post mortem examination to be performed, he shall do so, or have a pathologist do so. When a district attorney or circuit judge requests an autopsy, the State medical examiner or his appropriately qualified designee - pathologist shall pathologist shall perform it, and send the report to the requesting authority. Miss. Code Ann. § 41-61-11. State medical examiner can get lab facilities at the University of Mississippi Medical Center or elsewhere. Miss. Code Ann. § 41-61-7. State medical examiner must cooperate with law enforcement officials, including coroners, and perform pathological tests for them. Physicians, hospitals, etc. must also cooperate with the State medical examiner. Miss. Code Ann. § 41-61-13.

ACCESSIBILITY: Death certificate - Miss. Code Ann. § 41-61-15: State medical examiner shall keep detailed records, and issue death certificates in subject deaths.
Miss. Code Ann. § 41-57-7: Records of deaths on file in the division of public health statistics are accessible to the public at reasonable times for proper purpose pursuant to rules promulgated by the State board of health. The State Registrar may, in his discretion, upon request and payment of a fee, furnish any applicant a certified copy of the record of any death. State Board of Health, Rules and Regulations, Rule § 17.
Reports - no statutory indication exists relative to access to autopsy reports by next of kin.

INFANT DEATH: No statutory indication.

NOTE: Medical examiner may employ additional scientific, administrative, and clerical assistants as may be necessary. Miss. Code Ann. § 41-61-17. Autopsy provisions of Miss. Code Ann. § 41-37-1 to § 41-37-25 evidently apply to the State medical examiner provisions. State medical examiner promulgates rules and regulations. Miss. Code Ann. § 41-61-19.

MISSOURI

(A)

TITLE: County coroner. In each county except first class counties without a charter government, second counties, and counties having a medical examiner. Mo. Rev. Stat. § 58.010.

TERM: Four years. Mo. Rev. Stat. § 58.020.

APPOINTMENT: Elected by qualified voters of each county, and commissioned by the Governor. Mo. Rev. Stat. § 58.020.

QUALIFICATIONS: Citizen of the United States, over twenty-one, resident of the State for one whole year and of the county for which he is elected, six months. Mo. Rev. Stat. § 58.030.

SUBJECT DEATHS: Deaths by violence or casualty. Mo. Rev. Stat. § 58.260. Deaths resulting from a motor vehicle accident. Mo. Rev. Stat. § 58.445. In cities of 700,000 or more, or in counties of the first or second class, deaths where criminal violence is suspected, or death after abortion is suspected. Mo. Rev. Stat. § 58.451.

PROCEDURE: The coroner must summon a jury for an inquest. Mo. Rev. Stat. § 58.260. Coroner, in counties of the second class, must file a record of the inquest proceedings with the prosecuting attorney. Where an investigation by the coroner shows no inquest to be necessary, he shall file a written report with the prosecuting attorney containing the coroner's conclusions, and this provision applies to all counties. Mo. Rev. Stat. § 58.375. In motor vehicle accident cases, the coroner must make or cause to be made tests to determine alcohol or drug levels in the blood of the decedent. Mo. Rev. Stat. § 58.445. In cities over 700,000, coroner must be notified, and shall take charge of the body. Coroner must notify local law enforcement officials, and after they view the body and the scene, the coroner must make a report including the cause and manner of death. After they determine that criminal means were involved, or that a further investigation is necessary in the public interest, the coroner may make or cause to be made an autopsy. The coroner may employ pathologists, chemists, etc. to aid in the examination. Such outside help will be paid reasonable compensation by the city or county involved. If further inquiry seems necessary, the coroner shall direct the sheriff to summon an inquest jury. Mo. Rev. Stat. § 58.451. When a coroner is a physician or surgeon, he may get $25 for conducting a post mortem examination himself. Mo. Rev. Stat. § 58.030. Coroner gets paid for taking testimony at an inquest. Mo. Rev. Stat. § 58.540. When a physician, surgeon or pathologist is called to do a post mortem examination, he is paid by the county, upon authorization by the county court. Mo. Rev. Stat. § 58.560.

ACCESSIBILITY: Death certificates: Mo. Rev. Stat. § 193.240: the person in charge of internment shall file with the local registrar a certificate of death. Mo. Rev. Stat. § 58.455: coroner in cities of 700,000 or more, or in first or second class counties, must file the death certificate for the following types of deaths: by violence, in a suspicious or unusual manner or unusual circumstances, by the action of chemical, thermal, or electrical agents or following abortion, or from disease resulting from injury or infection, or suddenly when not disabled by recognizable disease.

Records and files of the division of health are open to inspection, subject to regulations of the division, and a further provision; the State Registrar shall not permit inspection of the records or issue a certified copy of a certificate or part thereof unless he is satisifed that the applicant therefor has an interest in the matter recorded, and that the information therein contained is for a research project, study, newspaper, radio, television, or other news media reports or reporting, or is necessary for the determination of personal or property rights. An applicant must, in writing, identify the records and his relationship to the deceased and the purpose of the inquiry. Mo. Rev. Stat. § 193.240. However, said section does not provide for inspection of records, only for certified copies of identified records. Certified copies provided for a fee. Mo. Rev. Stat. § 193.190.

Reports - Mo. Rev. Stat. § 58.725: autopsy report must be filed in county medical examiner's office. Mo. Rev. Stat. § 58.740 provides that the medical examiner must keep detailed records in his office, and when he deems further investigation necessary, he must send his records to the county prosecuting attorney. Mo. Rev. Stat. § 58.070 provides that all public records on file are subject to inspection by any person during legal office hours and when inspection will not interfere with the orderly performance of duties.

INFANT DEATH: No statutory indication.

NOTE: In counties having a city between 75,000 and 200,000, coroner may have deputies and assistants, as the county may deem necessary. See Mo. Rev. Stat. § 58.160 for classifications and salaries. See also Mo. Rev. Stat. § 58.170. Coroner is conservator of the peace, and shall take inquests. Mo. Rev. Stat. § 58.180. Sheriff performs coroner's duties when the coroner is absent. Mo. Rev. Stat. § 58.205. Coroner of St. Louis City controls the morgue, but the city may regulate this to whatever extent it wishes by ordinance. Mo. Rev. Stat. § 58.240, § 58.250. Fees allowed coroners for view of a dead body ($5) and other inquest-related items. Mo. Rev. Stat. § 58.250. No costs and fees allowed coroner unless it appears that the coroner has reason to believe that the person came to his death by violence or by casualty. Mo. Rev. Stat. § 58.580. In deaths other than by violence or casualty, where a death certificate is required for burial, the requesting party must pay for a view or inquest for the body. Mo. Rev. Stat. § 58.590. Death by poisoning. Mo. Rev. Stat. § 58.470.

(B)

TITLE: County medical examiner (in counties of the second class having between 120,000 and 200,000 and counties of the first class not having a charter form of government). Mo. Rev. Stat. § 58.700.

TERM: At the pleasure of the governing body. Mo. Rev. Stat. § 58.700.

APPOINTMENT: Appointed by county governing body. Mo. Rev. Stat. § 58.700.

QUALIFICATIONS: A physician duly licensed to practice by the State board of the healing arts. Mo. Rev. Stat. § 58.705.

SUBJECT DEATHS: As a result of 1) violence by homicide, suicide, or accident; 2) thermal, chemical, electrical or radiation injury; 3) criminal abortion, including those self-induced; 4) disease thought to be of a hazardous and contagious nature or which might constitute a threat to public health; or when any person dies a) suddenly when in apparent good health; b) when unattended by a physician, chiropractor, or an accredited Christian Science practitioner during the period of thirty-six hours immediately preceding death; c) while in the custody of the law, or while an inmate in a public institution; d) in any unusual or suspicious manner. Mo. Rev. Stat. § 58.720.

PROCEDURE: County medical examiner must be notified, and he or his assistant must take charge of the body and investigate the medical causes of death. In cases of sudden, violent, or suspicious death, the county medical examiner may ask the prosecuting attorney to apply for a court order to exhume the buried body, if buried before investigation. The medical examiner shall certify unattended deaths, those where attending physician will not certify, and any other death. Mo. Rev. Stat. § 58.720. The medical examiner may perform the autopsy himself if a pathologist, or order one to be performed by a competent pathologist when the medical examiner deems it necessary. Mo. Rev. Stat. § 58.725. Law enforcement officers must cooperate with the county medical examiner. Mo. Rev. Stat. § 58.730. Medical examiner not to summon a jury of inquisition. Mo. Rev. Stat. § 58.745.

ACCESSIBILITY: Death certificates - Mo. Rev. Stat. § 193.240: the person in charge of internment shall file with the local registrar a certificate of death. Mo. Rev. Stat. § 58.455: coroner in cities of 700,000 or more, or in first or second class counties, must file the death certificate for the following types of deaths: by violence, in a suspicious or unusual manner or unusual circumstances, by the action of chemical, thermal, or electrical agents or following abortion, or from disease resulting from injury or infection, or suddenly when not disabled by recognizable disease.

Records and files of the division of health are open to inspection, subject to regulations of the division, and a further provision; the State Registrar shall not permit inspection of the records or issue a certified copy of a certificate or part thereof unless he is satisfied that the applicant therefor has an interest in the matter recorded, and that the information therein contained is for a research project, study, newspaper, radio, television, or other news media reports or reporting, or is necessary for the determination or personal or property rights. An applicant must, in writing, identify the purpose of the inquiry. Mo. Rev. Stat. § 193.240. However, said section does not provide for inspection of records, only for certified copies of identified records. Certified copies provided for a fee. Mo. Rev. Stat. § 193.190.

Reports - Mo. Rev. Stat. § 58.725: autopsy report must be filed in county medical examiner's office. Mo. Rev. Stat. § 58.740 provides that the medical examiner must keep detailed records in his office, and when he deems further investigation necessary, he must send his records to the county prosecuting attorney. Mo. Rev. Stat. § 58.070 provides that all public records on file are subject to inspection by any person during legal office hours and when the inspection will not interfere with the orderly performance of duties.

INFANT DEATH: No statutory indication.

NOTE: County medical examiner may appoint assistants and other professional and technical personnel, subject to approval by the county governing body, which also sets the compensation for the extra personnel. Assistant medical examiners must have the same qualifications as the county medical examiner. Mo. Rev. Stat. § 58.710. See "1. Validity" and "2. Construction and application" after Mo. Rev. Stat. § 58.700 as to interpretation of "county" and "county governing body". See also Mo. Rev. Stat. § 58.760(4). County medical examiner to perform same duties as coroner, but not to act as sheriff. Mo. Rev. Stat. § 58.715. Criminal sanctions for failing to notify of a subject death. Mo. Rev. Stat. § 58.750. Any county may adopt medical examiner system. Mo. Rev. Stat. § 58.760 and may combine § 58.765.

MONTANA

TITLE: County coroner. Coroner may appoint deputies. Mont. Rev. Codes Ann. § 95-814.

TERM: Four years. Mont. Rev. Codes Ann. § 16-2406.

APPOINTMENT: Elected per county. Mont. Rev. Codes Ann. § 16-2403.

QUALIFICATIONS: Of age of voting as required by Montana Constitution, citizen of the State, elector of the county.

SUBJECT DEATHS: Death or stillbirth caused by other than natural causes, death or stillbirth causing suspicion of criminal conduct, when no physician or surgeon, licensed in Montana, will sign a death certificate. Mont. Rev. Codes Ann. § 95-801.

PROCEDURE: Coroner must be notified, and must investigate. In cases where criminal conduct is suspected, law enforcement agencies must be notified, and they are responsible for the investigation. Mont. Rev. Codes Ann. § 95-801. If coroner deems autopsy advisable, he shall retain a physician or pathologist to perform it. A record is made, the coroner keeping one and sending a copy to the county attorney. Only county attorney or Attorney General may require an autopsy. Mont. Rev. Codes Ann. § 95-802. Inquests are ordered by the county attorney, who works with the coroner to conduct them. Mont. Rev. Codes Ann. § 95-803. Lab facilities and needed personnel are to be supplied to the county commissioners. Mont. Rev. Codes Ann. § 95-814.

ACCESSIBILITY: Death certificate - Mont. Rev. Codes Ann. § 69-4425: a person in charge of internment shall file the death certificate with the local registrar. The Department of Health and Environmental Sciences may not permit inspection of the records or issue copies of a certificate unless it is satisfied that the applicant has a direct and tangible interest in the data recorded and that the information is necessary for the determination of personal and property rights. Mont. Rev. Codes Ann. § 69-4404.
Reports - Mont. Rev. Codes Ann. Const., Art. II, § 9: this establishes a right to know, which includes the right to examine documents. Mont. Rev. Codes Ann. § 59-512 further extends the right to know by making all public records open to inspection. There is no special exception to medical autopsy reports.

INFANT DEATH: No statutory indication.

NOTE: Justice of the Peace may discharge duties of coroner if office of coroner is vacant or if coroner is absent. Mont. Rev. Codes Ann. § 16-3405.

NEBRASKA

TITLE: County coroner: county attorney is ex officio county coroner. Neb. Rev. Stat. § 23-1210. (See PROCEDURE) re: coroner's physician; also see State ex rel Crosby v. Moorhead, 159 NW 412. Copy included.

TERM: As county attorney: two years.

APPOINTMENT: As county attorney: elected per county. Neb. Rev. Stat. § 32-308.

QUALIFICATIONS: No specific qualifications for coroner function.

SUBJECT DEATHS: The coroner shall hold an inquest upon the dead bodies of such persons only as are supposed to have died by unlawful means. Neb. Rev. Stat. § 23-1801.

PROCEDURE: Coroner may, at his discretion, issue a warrant to the county constable requiring him to summon an inquest jury. Neb. Rev. Stat. § 23-1801. See Neb. Rev. Stat. § 23-1802 to § 23-1818 for inquest-related procedures. A surgeon may be summoned to appear if the coroner or jury deem it necessary. Neb. Rev. Stat. § 23-1818. Coroner's physician, appointed by the coroner and removable by him, and paid, according to the determination of the county board by the county, shall certify the cause of death for deaths not certified by the attending physician, and shall perform or cause to be performed an autopsy when requested by the coroner. Neb. Rev. Stat. § 23-1820.

ACCESSIBILITY: Death certificates - Neb. Rev. Stat. § 71-605: filing of death certificate required by the county attorney - coroner or physician in attendance with the department of health, Bureau of Vital Statistics and the county registrar.
Certified copies of death certificates are furnished to next of kin upon receipt of a written request and payment of the statutory file search fee of three dollars. Administrative practice

to provide certified copies of death certificates to next of kin upon receipt of written request and payment of a fee. Neb. Rev. Stat. § 71-612.
Reports - Neb. Rev. Stat. § 84-712: all citizens of Nebraska, and all other persons interested in the examination of death investigation records, may examine the same, and make memoranda and abstracts therefrom, all free of charge, during the hours that the office of the clerk of the district court is open for the ordinary transaction of business. A certified copy of the record of any death is required to be supplied to any applicant for any proper purpose by the State Registrar upon payment of a fee.

INFANT DEATH: No statutory indication.

NEVADA

TITLE: District coroners. Every township is a district. Nev. Rev. Stat. § 259.010. Justices of the Peace are appointed by county coroners.

TERM: No statutory indication.

APPOINTMENT: All Justices of the Peace are ex officio coroners. Nev. Rev. Stat. § 259.020.

QUALIFICATIONS: No statutory indication.

SUBJECT DEATHS: Deaths caused by unlawful or suspicious means. Nev. Rev. Stat. § 440.420. When a person has been killed, or committed suicide, or has suddenly died under such circumstances as to afford reasonable grounds to suspect that the death has been occasioned by unnatural means. Nev. Rev. Stat. § 259.050.

PROCEDURE: Coroner or deputy coroner must be notified, and shall go to the place where the body is to make an investigation. Generally, an inquest is to be held. Where criminal activity is the apparent cause of death, the district attorney and county sheriff must be notified. Inquest not necessary when natural cause, suicide, accident, or act of person already in custody is the clear cause of death. Inquest jury must be summoned. Nev. Rev. Stat. § 259.050. See Nev. Rev. Stat. §§ 259.060 to 259.140 relative to inquest procedure.

ACCESSIBILITY: Death certificate - Nev. Rev. Stat. §§ 440.370, 440.380, 440.170, 440.175: death certificate required to be filed with both the State Registrar of vital statistics and county health officer (as collector of vital statistics for each county). These certificates are available for inspection subject to the following provisions: board may permit the use of data contained in vital statistics records for research purposes, but without identifying persons, and as the board may provide (administrative rules and regulations). No person may prepare or issue a certificate of death except as expressly authorized. Nev. Rev. Stat. § 440.650 provides that the State Registrar shall not issue a certified copy of the certificate unless he is satisfied that the applicant has a direct and tangible interest in the matter recorded.
Reports - Nev. Rev. Stat. § 259.120: coroner must file report of inquest findings with the clerk of the county district court. Unless otherwise expressly excluded, public records accessible through Nev. Rev. Stat. § 239.010.

INFANT DEATH: Local health officer to notify coroner of suspected SIDS death where provided for by county ordinance. Nev. Rev. Stat. § 440.420(4). County may authorize coroner to take body and perform autopsy in suspected SIDS cases, and to file report with the State Registrar. Nev. Rev. Stat. § 440.435. Annual report of SIDS cases to be published by State Registrar. Nev. Rev. Stat. § 440.437.

NEW HAMPSHIRE

TITLE: Medical Referee. N.H. Rev. Stat. Ann. § 611:1.

TERM: Five years. N.H. Rev. Stat. Ann. § 611:3.

APPOINTMENT: Appointed by Governor and council. N.H. Rev. Stat. Ann. § 611:1.

QUALIFICATIONS: Licensed physician - assistant medical referees in Rockingham County may be "learned in the science of medicine." N.H. Rev. Stat. Ann. §§ 611:1, 611:4a.

SUBJECT DEATHS: By violence, or unlawful act, or in any suspicious, unusual, or unnatural manner, or in prison, or when unattended by a physician or suddenly when in apparent health, including those sudden and unexpected deaths of children under three years of age. N.H. Rev. Stat. Ann. § 611:4.

PROCEDURE: Medical referee and county attorney are notified, and the medical referee goes to the scene or has body moved to place for viewing. SIDS cases require medical referee to take body for viewing and autopsy within twenty-four hours after he has notice. County attorney or Attorney General gives permission for autopsy, except in SIDS cases, where autopsy is mandatory. N.H. Rev. Stat. Ann. §§ 611:7, 611:8, 611:9.

ACCESSIBILITY: Death certificate - N.H. Rev. Stat. Ann. § 611:16: medical referee must file death certificate. Certified copies of these are available from the appropriate town clerk or registrar of vital statistics. N.H. Rev. Stat. Ann. § 611:14.
Reports - N.H. Rev. Stat. Ann. § 611:4: if death comes within parameters of this statute, report goes to Attorney General and county attorney. After inquest, copies to Superior Court, Attorney General, and county attorney. If SIDS, copy of the report goes to the director of the division of health services, who shall mail a copy of the findings to the parents or legal guardians of the child. N.H. Rev. Stat. Ann. § 611:15.

INFANT DEATH: Provisions for: 1) mandatory autopsy; 2) listing of SIDS on the death certificate; 3) provision of autopsy report to parents via the division of health services; 4) cost of autopsy paid for by the county. N.H. Rev. Stat. Ann. §§ 611:4, 611:7, 611:9, 611:12, 611:15, 611:16.

NOTE: N.H. Rev. Stat. Ann. § 611:15 provides for deputies when medical referee cannot be present. These deputies must be competent physicians.

NEW JERSEY

TITLE: A.) State medical examiner. N.J. Rev. Stat. § 52:17B-79; B.) County medical examiner (for each county or combined counties). N.J. Rev. Stat. § 52:17B-83.

TERM: A.) Five years. N.J. Rev. Stat. § 52:17B-79; B.) Five years. N.J. Rev. Stat. § 52:17B-83.

APPOINTMENT: A.) By the Governor, with the advice and consent of the Senate. N.J. Rev. Stat. § 52:17B-79; B.) By the board of chosen freeholders of the county. N.J. Rev. Stat. § 52:17B-83.

QUALIFICATIONS: A.) Duly licensed physician, graduate of medical school, qualified forensic pathologist. N.J. Rev. Stat. § 52:17B-79; B.) Licensed physician and other qualifications as set by the State medical examiner. N.J. Rev. Stat. § 52:17B-83.

SUBJECT DEATHS: a. Violent deaths, whether apparently homicidal, suicidal, or accidental, including but not limited to deaths due to thermal, chemical, electrical, or radiation injury and deaths due to criminal abortion, whether apparently self-induced or not; b. Deaths not caused by readily recognizable disease, disability or infirmity; c. Deaths under suspicious or unusual circumstances; d. Deaths within twenty four hours after admission to a hospital or institution; e. Deaths of inmates of prisons; f. Deaths of inmates of institutions maintained in whole or in part at the expense of the State or county where the inmate was not hospitalized therein for organic disease; g. Deaths from causes which might constitute a threat to public health; and h. Deaths related to disease resulting from employment or to accident while employed. N.J. Rev. Stat. § 52:17B-86.

PROCEDURE: County medical examiner must be notified of the subject death, as must be the county prosecutor. Medical examiner or assistant must then go and take charge of the body. After initial investigation, the medical examiner must file a report in his office, and with the county prosecutor if so requested. N.J. Rev. Stat. § 52:17B-87. If cause of death is established beyond a reasonable doubt, county medical examiner makes a full report to the State medical examiner and the county prosecutor on forms prescribed by the State medical examiner. If autopsy is deemed necessary by the State medical examiner, county medical examiner, an assignment judge of the Superior Court, the county prosecutor, or the Attorney General, one of the following shall perform it: the State medical examiner or an assigned assistant, the county medical examiner or an assistant, if either is trained in forensic pathology, or a competent forensic pathologist authorized by the State medical examiner. Report to be filed with the State medical examiner, county medical examiner, and county prosecutor. County medical examiner and State medical examiner must cooperate in order to have a competent autopsy performed. N.J. Rev. Stat. § 52:17B-88. Attorney General must provide State medical examiner with facilities, labs, etc. N.J. Rev. Stat. § 52:17B-81. Board of chosen freeholders must equip county medical examiners. N.J. Rev. Stat. § 52:17B-85.

ACCESSIBILITY: Death certificate - N.J. Rev. Stat. § 26:6-9: death certificate is to be completed by the "undertaker" with necessary data being provided by the coroner or county physician (State medical examiner or chief medical examiner). Public records accessible through N.J. Rev. Stat. § 47:1A-2.
Reports - N.J. Rev. Stat. § 52:17B-88: State medical examiner and county medical examiners must keep full and complete records in their offices. Reports are to be filed with their respective offices and the county prosecutor.

Public records accessible through N.J. Rev. Stat. § 47:1A-2.

INFANT DEATH: No statutory indication.

NOTE: State medical examiner promulgates rules and regulations. N.J. Rev. Stat. § 52:17B-80. State medical examination advisory commission has: commissioner of health, Attorney General, superintendent of State police, or the designees of these last three, chairman of pathology departments at Rutgers Medical School and New Jersey College of Medicine and Dentistry, and two citizens appointed by the Governor. See further N.J. Rev. Stat. § 52:17B-82. State medical examiner may take over county medical examiner's duties when county medical examiner is absent. N.J. Rev. Stat. § 52:17B-83. County medical examiner may appoint deputies or assistants, qualified as him. N.J. Rev. Stat. § 52:17B-84. Offices of coroner, county physician, and chief medical examiner abolished. N.J. Rev. Stat. § 52:17B-93. Further duties of county medical examiners and State medical examiner. N.J. Rev. Stat. §§ 40A:9-46 to 40A:9-60.

NEW MEXICO

TITLE: Statewide medical investigator program divided into districts. N.M. Stat. Ann. § 12-29-3.

TERM: No statutory indication for medical investigator. District medical investigators shall serve at the pleasure of the State medical investigator. N.M. Stat. Ann. § 12-29-3.

APPOINTMENT: Board of medical investigators shall employ the State medical investigator, who may appoint district, and where necessary, deputy medical investigators. N.M. Stat. Ann. §§ 12-29-2, 12-29-3.

QUALIFICATIONS: State medical investigator must be a physician licensed to practice in New Mexico, and as far as practicable, having training in pathology and forensic medicine. District medical investigators shall be licensed physicians. N.M. Stat. Ann. § 12-29-3.

SUBJECT DEATHS: Sudden, violent, or untimely deaths, or found dead and the cause of death is unknown. N.M. Stat. Ann. § 15-43-44.

PROCEDURE: Any person who becomes aware of a subject death must immediately notify the appropriate law enforcement authorities and the office of the State or district medical investigator. State or district medical investigator, or deputy shall view and take legal custody of the body. N.M. Stat. Ann. § 15-43-44. When State or district medical investigator believes no criminal act to be involved, he shall execute a death certificate. Deputy investigator, when he investigates a death and finds no criminal act to be involved, must file a report to his State or district medical investigator. The State or district medical investigator executes a death certificate and release form. N.M. Stat. Ann. § 15-43-45. When State or district medical investigator or deputy suspect a death was caused by criminal act or omission or if the cause of death is obscure, an autopsy shall be ordered to be performed by a qualified pathologist. The pathologist's report, and any other testimony from other witnesses, shall constitute an inquest. N.M. Stat. Ann. § 15-43-46.

ACCESSIBILITY: Death certificate - N.M. Stat. Ann. § 15-43-45: if no criminal suspicion, State or district medical investigator files a death certificate with the Department of Health and Social Services (registrar of vital statistics). N.M. Stat. Ann. § 12-4-48. The State Registrar can issue certified copies of certificates to anyone demonstrating a tangible and proper interest. N.M. Stat. Ann. § 12-4-47 provides that it is unlawful for any person to permit inspection except as authorized by law. Department may authorize disclosure of data contained in vital statistics records for research purposes. N.M. Stat. Ann. § 12-4-47(B).
Reports - N.M. Stat. Ann. § 12-29-3(G): a report of the findings of an investigation must be sent to the district attorney. State medical investigator shall maintain records of deaths which are investigated. No specific provision regarding autopsy reports exists however, N.M. Stat. Ann. § 71-6-7 provides for the inspection and survey of public records which includes all records maintained by any State governmental agency. Handbook for Representatives of the Office of Medical Investigation, Ch. 11, § 1, ¶ 5.

INFANT DEATH: No statutory indication.

NOTE: Board of Medical Investigations - consists of dean of the University of New Mexico medical school, director of the department of hospitals and institutions, and the chief of the State police. N.M. Stat. Ann. § 12-29-1. Board shall formulate broad policy for the operation of the State and district medical investigator offices. N.M. Stat. Ann. § 12-29-2. State medical investigator shall be assigned as an employee of the University of New Mexico School of Medicine, N.M. Stat. Ann. § 12-29-2, and shall promulgate rules and regulations. N.M. Stat. Ann. § 12-29-3(F). The State medical investigator shall maintain his office at the school of medicine at the University of New Mexico. N.M. Stat. Ann. § 12-29-3(B). Funds for the operation of the State and district medical investigators' offices shall be appropriated to and administered by the University of New Mexico School of Medicine. N.M. Stat. Ann. § 12-29-3(I).

NEW YORK
(A)

TITLE: County coroners. N.Y. County Law, Art. 8, § 400.

TERM: Three years. N.Y. County Law, Art. 8, § 400(1).

APPOINTMENT: Elected. N.Y. County Law, Art. 8, § 400.

QUALIFICATIONS: No statutory indication.

SUBJECT DEATHS: a) A violent death, whether by criminal violence, suicide, or casualty; b) A death caused by unlawful act or criminal neglect; c) A death occurring in a suspicious, unusual or unexplained manner; d) A death caused by suspected criminal abortion; e) A death while unattended by a physician, so far as can be discovered or when no physician able to certify the cause of death as provided in public health law and in form as prescribed by the commissioner of health can be found; f) A death of a person confined in a public institution other than a hospital, infirmary, or nursing home. N.Y. County Law, Art. 17A, § 673.

PROCEDURE: Upon notification must proceed to place of body and take charge; if coroner is not a physician, must notify coroner's physician or other designated physician to make post-mortem examinations and dissections (such coroner's physician or designated physician shall be treated as the statute concerning coroner's physician set forth); shall fully investigate the essential facts concerning the death, take names and addresses of witnesses, and reduce all such facts to writing; take possession of all portable objects concerning the means of death, shall make such examinations including autopsies as are deemed necessary or to determine the means or manner of death, or to discover facts, the ascertainment of which is requested in writing by the district attorney, sheriff, chief of police, superintendent of State police, or commissioner of corrections; shall make quantatative tests for alcohol re motor vehicle deaths. N.Y. County Law, Art. 17A, § 674. Note: specific procedure may be dictated by local ordinance or rules in extension of those set forth in N.Y. County Law § 673, in particular concerning the involvement and control of other officials; also see N.Y. County Law, Art. 17A, § 671.

ACCESSIBILITY: Death certificate - N.Y. County Law, Art. 17A, § 677: death certificate required. Filing with local registrar by person in control of the body. No provision for accessibility to the certificates.
Upon request, a certified copy or a certified transcript of the record of any registered death is required to be issued to any applicant unless it does not appear that such record is necessary or required for judicial or other proper uses. N.Y. County Law, Art. 41, § 4174, N.Y. County Law, Art. 41, § 4143.
Reports - N.Y. County Law, Art. 17A, § 677: written reports must be filed in the office of the coroner; reports of autopsies are to be done on prescribed forms and filed with same office. Full records are to be kept by same office with access upon application of personal representatives, spouse, etc. or any person who is or may be affected in a civil or criminal action upon application of any person having a substantial interest therein, an order may be made by a court of record by a justice of the Supreme Court that the records of investigations may be made available for inspection; copies of reports to be transmitted to the district attorney if evidence indicates that a crime was committed.

INFANT DEATH: No statutory indication.

NOTE: Coroner's physician appointed when coroner is not a licensed physician. N.Y. County Law, Art. 8, § 400(4-b). Office of the coroner may abolish the medical examiner system or a coroner and coroner physician system substituted. N.Y. County Law, Art. 8, § 400(2). See N.Y. County Law, Art. 17A, § 670 regarding conflict with county home rule charters. Coroner must work jointly with coroner's physicians when coroner is not a licensed physician to practice within New York State. N.Y. County Law, Art. 17A, § 673(2). District attorney of Lewis County is the coroner pursuant to County Law, Art. 8, § 400(3a). *Review of statutes indicates that local law dictates the specifics of structure, procedure, accessibility, etc. where such ordinances exist, such as in N.Y. County Law, Art. 17A, § 674, N.Y. Public Health, § 4143(4) (Erie County Medical Director), New York and King County, see N.Y. County Law, § 939, provide for medical assistance to district attorneys who are physicians and surgeons. District attorney, sheriff, police chief of city or county, superintendent of State police, or the commissioner of correction may require, in writing, an autopsy. N.Y. Public Health, § 4210. District attorney of Lewis County is the coroner. N,Y. County Law, § 400(3-a).

(B)

TITLE: Coroners and coroner's physicians. N.Y. County Law, Art. 8, § 400.

TERM: Fixed by board of supervisors of the county. N.Y. County Law, Art. 8, § 400(4-b).

APPOINTMENT: Appointed by board of supervisors. N.Y. County Law, Art. 8, § 400(4-b).

QUALIFICATIONS: Where coroner is not a physician, coroner's physician must be licensed to practice within the State of New York. N.Y. County Law, Art. 8, § 400(4-b).

SUBJECT DEATHS: Same as coroner system. N.Y. County Law, Art. 17A, § 673.

PROCEDURE: Same as coroner system. N.Y. County Law, Art. 17A, § 674.

ACCESSIBILITY: Same as coroner system. N.Y. County Law, Art. 17A, § 677.

INFANT DEATH: No statutory indication.

NOTE: See NOTE "coroner".

(C)

TITLE: Medical examiner. N.Y. County Law, Art. 8, § 400.

TERM: At the pleasure of the board of supervisors. N.Y. County Law, Art. 8, § 400 (4-a).

APPOINTMENT: Board of supervisors. N.Y. County Law, Art. 8, § 400(4-a).

QUALIFICATIONS: Resident of the county, licensed physician, qualified to perform autopsies. N.Y. County Law, Art. 8, § 400(4-a).

SUBJECT DEATHS: Same as coroner system. N.Y. County Law, Art. 17A, § 673.

PROCEDURE: Same as coroner system. N.Y. County Law, Art. 17A, § 674.

ACCESSIBILITY: Same as coroner system. N.Y. County Law, Art. 17A, § 677.

INFANT DEATH: No statutory indication.

NOTE: See NOTE "coroner".

NORTH CAROLINA

TITLE: A.) County coroner. N.C. Gen. Stat. § 152-1; B.) County medical examiner(s). N.C. Gen. Stat. § 130-197.

TERM: A.) Four years. N.C. Gen. Stat. § 152-1; B.) Three years. N.C. Gen. Stat. § 130-197.

APPOINTMENT: A.) Elected by qualified voters. N.C. Gen. Stat. § 152-1; B.) Appointed by the Secretary of Human Resources from list supplied by local medical society. N.C. Gen. Stat. § 130-197.

QUALIFICATIONS: A.) No statutory indication; B.) Licensed medical doctor. N.C. Gen. Stat. § 130-197. Skilled pathologist. N.C. Gen. Stat. § 130-192.

SUBJECT DEATHS: A.) Whenever it appears that the deceased probably came to his death by the criminal act or default of some person. N.C. Gen. Stat. § 152-7; B.) Deaths apparently by criminal act or default, or apparently by suicide, or while an inmate of any penal or correctional institution, or under any suspicious, unusual, or unnatural circumstances. N.C. Gen. Stat. § 130-198. Also, in the case of death or fetal death without medical attendance. N.C. Gen. Stat. § 130-46.

PROCEDURE: A.) Coroner shall go to the body and make a careful investigation and inquiry, and make a complete record. Coroner must notify district attorney and the county medical examiner. If no inquest, report to be filed with medical examiner and district attorney. Inquest held only if coroner believes that criminal act to be involved. N.C. Gen. Stat. § 152-7.
B.) Medical examiner to be notified. N.C. Gen. Stat. § 130-198. Medical examiner shall take charge of the dead body, and after making an investigation, shall file a report with the Secretary of Human Resources on forms prescribed by the Secretary. N.C. Gen. Stat. § 130-199. A competent pathologist may be secured to perform an autopsy if 1) the Secretary or medical examiner deem one advisable, or 2) an autopsy is requested by the district attorney, or any superior court judge on his own motion, or on a motion of any party. N.C. Gen. Stat. § 130-200. See N.C. Gen. Stat. § 130-202.2 for procedural relationship between coroner and medical examiner. Lab facilities provided by the Department of Human Resources. N.C.

Gen. Stat. § 130-193. County to pay for autopsies of deceased residents; otherwise, the Department of Human Resources shall pay. N.C. Gen. Stat. § 130-200.

ACCESSIBILITY: Death certificates - N.C. Gen. Stat. § 130-46: funeral directors or persons acting as such who first assumes custody of a dead body must file a death certificate with the local registrar (part of the State Registrar of vital statistics system). N.C. Gen. Stat. § 130-59 provides that no person other than those authorized by the State Registrar shall have access to any original birth or death records. Reports - N.C. Gen. Stat. § 152-7: a copy of written testimony from inquest to be filed with the medical examiner and district attorney (medical examiner). Copy of autopsy report to the district attorney judge and the requesting party via an order of a court of record after need, therefore, has been shown. N.C. Gen. Stat. § 130-200. Custodians of public records shall permit them to be inspected and examined at reasonable times by any person. N.C. Gen. Stat. § 132-6.

INFANT DEATH: No statutory indication.

NOTE: See N.C. Gen. Stat. § 152-1 (1975 Supplement) for listing of counties abolishing office of coroner. See N.C. Gen. Stat. § 130-200 for provisions relating to bodies already buried or about to be cremated. Secretary of Human Resources promulgates rules and regulations. Department of Human Resources may employ qualified pathologists and toxicologists, etc. N.C. Gen. Stat. § 130-196. For general rule-making, authority of the Secretary of Human Resources, see N.C. Gen. Stat. § 130-201.

NORTH DAKOTA

TITLE: A.) County coroner. N.D. Cent. Code § 11-19-01, et seq.; B.) Medical county (counties with more than 8,000) coroner. N.D. Cent. Code § 11-19A-02.

TERM: A.) N.D. Cent. Code § 11-19-01, et seq., no statutory indication; B.) Two years. N.D. Cent. Code § 11-19A-03.

APPOINTMENT: A.) No statutory indication; B.) Board of county commissioners. N.D. Cent. Code § 11-19A-03.

QUALIFICATIONS: A.) No statutory indication, see N.D. Cent. Code § 11-19-01, et seq.; B.) Physician, licensed for two years. N.D. Cent. Code § 11-19A-04.

SUBJECT DEATHS: As a result of criminal or violent means, casualty, suicide, accidental death, or died suddenly when in apparent good health, or in a suspicious or unusual manner. N.D. Cent. Code § 11-19A-07. Also, deaths without medical attendance. N.D. Cent. Code § 23-02.1-19(4).

PROCEDURE: Coroner or law enforcement officer must be notified. N.D. Cent. Code § 11-19A-07. Coroner must complete death certificate in all cases coming under his jurisdiction. N.D. Cent. Code § 11-19A-08. Coroner or his deputy may take custody of the body for autopsy. When the coroner does not deem an autopsy necessary, the sheriff and State's attorney may direct the coroner, his deputy, or a pathologist to perform one. N.D. Cent. Code § 11-19A-11. Coroner must keep full and complete records in cases where the coroner or State's attorney feel further investigation is necessary. N.D. Cent. Code § 11-19A-08. County morgue facilities or existing hospital facilities to be used for investigations and autopsies. N.D. Cent. Code § 11-19A-12. Cause and manner of death to be put on death certificate. N.D. Cent. Code § 11-19A-13.

ACCESSIBILITY: A.) Death certificate - N.D. Cent. Code § 23-02.1-27: The Health Statistics Act and the regulations promulgated pursuant thereto, R23-02.1-13, Disclosure of Records, provide that the applicant must have a direct and tangible interest in such record and must demonstrate same. N.D. Cent. Code § 23-02.1-19: death certificates are filed with the local registrar. Reports - N.D. Cent. Code § 11-19-16: testimony and findings of coroner's inquests to be reduced to writing and filed with office of the clerk of the district court of the county. N.D. Cent. Code § 11-19-17 provides that the clerk of said district court shall maintain a book of coroner's proceedings. Except as otherwise provided, all records of public and governmental bodies of the State and any political subdivision shall be public records, open and accessible for inspection during reasonable office hours. N.D. Cent. Code § 44-04-18.
B.) Death certificate - N.D. Cent. Code § 23-02.1-27: the Health Statistics Act and its regulations, in particular, R23-02.13, Disclosure of Records, provide that the applicant must have a direct and tangible interest in such record and must demonstrate them. N.D. Cent. Code § 23-02.1-19: death certificates are filed with the local registrar. N.D. Cent. Code §§ 11-19A-08, 11-19A-13: coroner must complete death certificate in all cases coming under his jurisdiction. Cause and manner of death to be

put on death certificate and filed with local registrar.
Reports - N.D. Cent. Code § 11-19A-08: all records of the office of the coroner are property of the county and shall be considered public records. Coroner must notify relativer or friends of the deceased, giving details of the death and disposition of the deceased person. N.D. Cent. Code § 11-19A-15.

INFANT DEATH: No statutory indication.[12]

NOTE: Sheriff to act as coroner when there are no physicians in a county. N.D. Cent. Code § 11-19A-06. N.D. Cent. Code § 11-19A-17: provisions above apply only to counties of 8,000 or more. See N.D. Cent. Code § 11-19 for provisions for coroner in other counties, where coroner is appointed as in N.D. Cent. Code § 11-19A-03, but is a judicial officer responsible for conducting inquests. See N.D. Cent. Code § 11-09-27 for abolition of coroner in counties adopting a form of county managership.

OHIO

TITLE: County coroner. Ohio Rev. Code Ann. § 313.01.

TERM: Four years. Ohic Rev. Code Ann. § 313.01.

APPOINTMENT: Elected in each county. Ohio Rev. Code Ann. § 313.01. Coroner may appoint assistant coroners who are licensed physicians or pathologists. Ohio Rev. Code Ann. § 313.05.

QUALIFICATIONS: Physician licensed to practice in the State two years before his election, and in good standing in his profession. Ohio Rev. Code Ann. § 313.02.

SUBJECT DEATHS: As a result of criminal or other violent means, or by casualty, or by suicide, or suddenly when in apparent health, or in any suspicious or unusual manner. Ohio Rev. Code Ann. § 313.02.

PROCEDURE: Coroner must be notified. Ohio Rev. Code Ann. § 313.12. Coroner or assistant coroner may go to the dead body and take charge of it. If, in the opinion of the coroner, or the assistant when the coroner is absent, an autopsy is necessary, such autopsy shall be performed by the coroner, deputy coroner, or pathologists. Detailed report to be filed in the office of the coroner. Ohio Rev. Code Ann. § 313.13. Each county may establish a lab and morgue to be used for the proper performance of the duties of the coroner. Ohio Rev. Code Ann. § 313.07. If there is no lab, the coroner may request the coroner of a county with a lab to perform the necessary lab exams. Ohio Rev. Code Ann. § 313.16. Coroner shall notify relatives of deceased persons coming under his jurisdiction. Ohio Rev. Code Ann. § 313.14. Coroner must send records of all deaths, which, in the opinion of the coroner or county prosecuting attorney, require further investigation to the county prosecuting attorney. Ohio Rev. Code Ann. § 313.09.

ACCESSIBILITY: Death certificate - Ohio Rev. Code Ann. § 313.19 (See footnote): filed with Division of Vital Statistics; accessible via Ohio Rev. Code Ann. § 3705.05.
Reports - Ohio Rev. Code Ann. § 313.09: coroner must keep full and complete records, and these records are public records. Ohio Rev. Code Ann. § 313.10.

INFANT DEATH: No statutory indication.

NOTE: Inquest by coroner. Ohio Rev. Code Ann. § 313.17. See Case Notes after Ohio Rev. Code Ann. § 313.19 for controversy over whether coroner's verdict and the death certificate filed by him list the legally accepted cause of death.

OKLAHOMA

TITLE: Chief medical examiner. Okla. Stat. Tit. 63, § 933.

TERM: Chief medical examiner shall serve for such term as the board may fix. Okla. Stat. Tit. 63, § 934.

APPOINTMENT: Chief medical examiner appointed by the board. Okla. Stat. Tit. 63, § 934. Chief medical examiner shall appoint medical examiners for each county, Okla. Stat. Tit. 63, § 937, and may employ staff members as the board may specify. Okla. Stat. Tit. 63, § 933.

QUALIFICATIONS: Chief medical examiner must be a citizen of the United States, physician licensed to practice in Oklahoma, and a diplomate of the American Board of Pathology. Okla. Stat. Tit. 63, § 934. County medical examiners shall be doctors of medicine or osteopathy and surgery, and hold a license to practice in Oklahoma. Okla. Stat. Tit. 63, § 937.

SUBJECT DEATHS: a) Violent deaths, whether apparently homicidal, suicidal, or accidental, including but not limited to, deaths due to thermal, chemical, electrical, or radiational injury, and deaths due to criminal abortion, whether apparently self-induced or not; b) deaths under suspicious, unusual or unnatural circumstances; c) deaths related to disease which might constitute a threat to public health; d) unattended deaths; e) deaths of persons after unexplained coma; f) deaths that are medically unexpected and that occur in the course of a therapeutic procedure; g) deaths of any inmates occurring in any place of penal incarceration; and h) deaths of persons whose bodies may be ultimately unavailable for pathological study. Okla. Stat. Tit. 63, § 938.

PROCEDURE: Medical examiner must be notified of subject deaths. Okla. Stat. Tit. 63, § 940. Medical examiner must immediately conduct an investigation. Okla. Stat. Tit. 63, § 941. Upon completion of the investigation, the medical examiner must file a report with the chief medical examiner, Okla. Stat. Tit. 63, § 942, on forms prescribed by the chief medical examiner. Okla. Stat. Tit. 63, § 939. When necessary to determine the cause of death, or when required by the public interest, the chief medical examiner, his designee, the medical examiner or a district attorney shall require and authorize an autopsy to be conducted. Requests from private persons or from other public officials must be at least considered in determining whether the public interest requires an autopsy. Okla. Stat. Tit. 63, § 944. Chief medical examiner or person designated by him shall perform the autopsy, and a full and complete report thereof shall be filed in the office of the chief medical examiner; copies shall be furnished to district attorneys and law enforcement officers conducting criminal investigations of certain deaths. Okla. Stat. Tit. 63, § 945. Board is to provide a suitably equipped lab. Okla. Stat. Tit. 63, § 936. Designated pathologist is to be paid from funds appropriated to the board. Okla. Stat. Tit. 63, § 945.

ACCESSIBILITY: Death certificate - Okla. Stat. Tit. 63, § 947: Chief medical examiner, his designee, or a county medical examiner shall make out the death certificate in subject deaths, and copies shall be kept in the office of the chief medical examiner.
Reports - Okla. Stat. Tit. 63, § 949: full and complete records must be kept at the office of the chief medical examiner. Next of kin, or others having need for records may obtain them by making a written request and paying a fee set by the board.

INFANT DEATH: No statutory indication.

NOTE: Board of Medico-Legal Investigations - Director of State Bureau of Investigation, or designee; State Commissioner of Health, or designee; Dean of the University of Oklahoma College of Medicine, or designee; President of the Oklahoma Bar Association, or designee; President of the Oklahoma Osteopathic Association, or designee; and President of the Oklahoma State Medical Association, or designee. Chief medical examiner ex officio member of the board. Okla. Stat. Tit. 63, § 931. Funds for the operation of the death investigation system shall be appropriated by the Legislature. Okla. Stat. Tit. 63, § 954.

OREGON

TITLE: A.) State medical examiner; B.) Deputy State medical examiners; C.) District medical examiners; D.) Assistant district medical examiners; E.) Deputy district medical examiners.

TERM: A.) No statutory indication; B.) No statutory indication; C.) No statutory indication; D.) No statutory indication; E.) No statutory indication.

APPOINTMENT: A.) Appointed by the Administrator of the Health Division from a list of pathologists recommended by the advisory board. Ore. Rev.Stat. § 146.015; B.) State medical examiner shall appoint deputy State medical examiner after consultation with the advisory board; C.) District medical examiner appointed by the State medical examiner with the approval of the board of county commissioners. Ore. Rev. Stat. § 146.065(2); D.) Assistant district medical examiners appointed by district medical examiners. Ore. Rev. Stat. § 146.080(1); E.) District medical examiner, with the approval of the district attorney, appoints deputy medical examiners. Ore. Rev. Stat. § 146.085(1).

QUALIFICATIONS: A.) Must be a physician holding a current license to practice medicine and surgery and who is eligible for certification by the American Board of Pathology. Ore. Rev. Stat. § 146.003(9) and § 146.015(3); B.) Set by advisory board, Ore. Rev. Stat. § 146.025(1), but he must be a physician, Ore. Rev. Stat. § 146.003(6) and § 146.003(8); C.) Must be a physician. Ore. Rev. Stat. § 146.003(6); D.) As set by the advisory board. Ore. Rev. Stat. § 146.080(2); E.) Set by district medical examiner and district attorney. Ore. Rev. Stat. § 146.085(2).

SUBJECT DEATHS: 1) Apparently homicidal, suicidal, or occurring under suspicious or unknown circumstances; 2) Resulting from the unlawful use of dangerous or narcotic drugs or the use or abuse or chemicals or toxic agents; 3) Occurring while incarcerated in any jail, correction facility or in police custody; 4) Apparently accidental or following an injury; 5) By disease, injury or toxic agent during or arising from employment; 6) While not under the care of a physician during the period immediately previous to death; or 7) Related to disease which might constitute a threat to the public health. Ore. Rev. Stat. § 146.090.

PROCEDURE: Medical examiner shall investigate and certify the cause and manner of all subject deaths. Ore. Rev. Stat. § 146.190. District medical examiner and district attorney responsible for the investigation of subject deaths. Ore. Rev. Stat. § 146.095(3). Medical examiner must also file a written report in the district medical examiner's office. District attorney need not be immediately notified of deaths of types 4) to 7) above. Ore. Rev. Stat. § 146.100(5). Medical examiner or district attorney may order samples of blood or urine for analysis. Ore. Rev. Stat. § 146.113(1). Medical examiner or district attorney may order autopsy performed. Ore. Rev. Stat. § 146.117(1). State medical examiner shall perform autopsies when, in his judgment, such autopsy is necessary, when requested by a medical examiner or district attorney. Ore. Rev. Stat. § 146.045(2).[13] Pathologists, designated by the State medical examiner, Ore. Rev. Stat. § 146.045(2)(b), shall perform autopsies. Ore. Rev. Stat. § 146.117(2).

ACCESSIBILITY: Death certificate - Certificates are issued and maintained by the medical examiner, Ore. Rev. Stat. § 146.090; also filed with the Board of Commissioners, Ore. Rev. Stat. § 146.121.
Ore. Rev. Stat. § 432.120 provides that death records shall be open to inspection by persons who have a direct and proper interest in the record, which is defined to include next of kin. The provisions of Ore. Rev. Stat. § 192.420 do not apply to death records pursuant to Ore. Rev. Stat. § 192.500(h).
Reports - Ore. Rev. Stat. § 192.420: this provides for the right of public inspection of records, except as expressly excluded (no express exclusion of reports or certificates noted). Ore. Rev. Stat. § 146.035(6) provides that next of kin, and others, may examine and obtain copies of any medical examiner's report, autopsy report, or lab test report ordered by a medical examiner. State medical examiner's office shall file and maintain records on all deaths investigated. Ore. Rev. Stat. § 146.035(5)(a). District office shall maintain copies of death investigation reports, autopsy reports, lab analysis reports. Ore. Rev. Stat. § 146.075(6). These reports must also be made available as in Ore. Rev. Stat. § 146.035(6).

INFANT DEATH: No statutory indication.

NOTE: State medical examiner Advisory Board: seven members appointed by the Governor; the Chairman of the Department of Anatomic Pathology at the University of Oregon Medical School, the Superintendent of the State Police, a sheriff, a physician licensed the Oregon Board of medical examiners, a pathologist, a district attorney, and a funeral director and embalmer licensed by the State Board of Funeral Directors and Embalmers. Board to make policies for the administration of the Oregon death investigation system. Ore. Rev. Stat. § 145.015, and see § 146.025, Advisory Board may recommend a proposed budget for the State medical examiner's office. Ore. Rev. Stat. § 146.025(5). Peace officers may be appointed as deputy medical examiners. Ore. Rev. Stat. § 146.085(1). District attorney may order inquest, and district attorney shall have the powers of a judicial officer. Records of inquest to be filed in the office of the State medical examiner, and the inquest records shall be made available as provided for in Ore. Rev. Stat. § 146.035(6). Ore. Rev. Stat. § 146.135.

PENNSYLVANIA

TITLE: County coroner. Pa. Stat. Ann. Const., Art. 9, § 4 and Art. 16, § 401(a)(4).

TERM: Four years. See Pa. Stat. Ann. Const., Art. 9, § 4. Coroner not listed specifically, but comes under "such others" county officers evidently. Pa. Stat. Ann. Art. 16, § 401 (b).

APPOINTMENT: Elected per county. Also, see Pa. Stat. Ann. Const., Art. 9, § 4, Art. 16, § 401.

QUALIFICATIONS: No statutory indication.

SUBJECT DEATHS: 1) Any sudden, violent, or suspicious death; 2) Any death wherein no cause of death is properly certified by a person duly authorized therefor; 3) Any death resulting from a mine accident, as directed by law; 4) Deaths resulting from drownings, cave-ins, subsidences, 5) Any stillbirth, or the death of any baby dying within twenty-four hours after its birth, and, in addition thereto, 6) The death of any prematurely born infant, wherein the cause of death is not properly certified by a person duly authorized therefor. Pa. Stat. Ann. Art. 16, §§ 1237, 4236. Also, unattended or suspicious deaths. Pa. Stat. Ann. Art. 35, § 450.503.

PROCEDURE: The coroner shall investigate. The purpose of the investigation shall be to determine whether or not there is any reason sufficient to the coroner to believe that any subject death may have resulted from the criminal acts or criminal neglect of persons other than the deceased, rather than from natural causes or by suicide. Pa. Stat. Ann. Art. 16, § 1237 and § 4236. The coroner must also determine whether an inquest and autopsy should be held. Pa. Stat. Ann. Art. 16, §§ 1238, 4237, 9521. Coroner must investigate unattended or suspicious deaths and supply the medical certification of the death. Pa. Stat. Ann. Art. 35, § 450.503. Coroner shall consult with the district attorney. Pa. Stat. Ann. Art. 16, § 1242, § 4241. Autopsies in counties of the 6th class not to be more than $25. Pa. Stat. Ann. Art. 16, § 11103. Post mortem examinations in counties of not more than 50,000 to be paid for at a rate set by the presiding judge of the courts of the county. Pa. Stat. Ann. Art. 16, § 11368. Fees for physicians or surgeons doing a post mortem examination in Berks and Lancaster counties to be more than $10, unless the county commissioners want to pay more. Pa. Stat. Ann. Art. 16, § 11369.

ACCESSIBILITY: Death certificates - Pa. Stat. Ann. Art. 16, § 1244: death certificate filed with local registrar. No regulations have been promulgated which would permit next of kin to inspect death certificates. However, information contained on death certificates is released in certified copy form upon payment of necessary fees for purpose of benefit payment.
Reports - Pa. Stat. Ann. Tit. 16, § 1251: coroner's official records and papers to be deposited in office of prothonotary for the inspection of all persons interested therein. Accessibility to public records is not open to public inspection except as authorized by regulations of the advisory health board (Pa. Stat. Ann. Tit. 35, § 450.801).

INFANT DEATH: No statutory indication.

NOTE: Counties divided into eight classes, each of which is dealt with in differing manners on differing issues. However, structure, procedure, and accessibility are basically identical throughout the Pennsylvania statutory scheme for death investigation. Philadelphia has an appointive medical examiner system, under its home rule powers granted by Pa. Stat. Ann. Tit. 53, § 13132.[18]

RHODE ISLAND

TITLE: Chief medical examiner and assistant medical examiners. R.I. Gen. Laws Ann. § 23-4-5.

TERM: No statutory indication.

APPOINTMENT: Chief medical examiner appointed by the Governor with the advice and consent of the State medical commission. R.I. Gen. Laws Ann. § 23-4-5(a). Assistant medical examiners are appointed by the chief medical examiner with the approval of the Director of Health. R.I. Gen. Laws Ann. § 23-4-5(b).

QUALIFICATIONS: The chief medical examiner must be a physician licensed in Rhode Island, and a qualified pathologist, certified in anatomical pathology by the American Board of Pathology, with forensic training or experience. R.I. Gen. Laws Ann. § 23-4-5(a). Assistant medical examiners must be MDs or osteopaths. R.I. Gen. Laws Ann. § 23-4-1(6).

SUBJECT DEATHS: 1) death by a homicide, suicide, or casualty; 2) death due to a criminal abortion; 3) death due to an accident involving lack of due care on the part of the person other than the deceased; 4) death which is the immediate or remote consequence of any physical or toxic injury incurred while the deceased person was employed; 5) death due to the use of addictive or unidentifiable chemical agents; or 6) death due to an infectious agent capable of spreading an epidemic within the State. R.I. Gen. Laws Ann. § 23-4-4.

PROCEDURE: In criminal or suspicious matters, including deaths of types 1) and 2) above, the police or the State medical examiner's office must be notified. In unattended deaths, or deaths of types 3) to 6) above, the State medical examiner's office must go to the place of death and make personal inquiry into the cause and manner of death. R.I. Gen. Laws Ann. § 23-4-8. Autopsies performed when, in the judgment of an agent of the office of State medical examiner, death might reasonably be expected to involve causes of death enumerated in the death investigation provisions. R.I. Gen. Laws Ann. § 23-4-3(iii). Director of Health shall provide morgue with labs, equipment, etc. for carrying out medical examiner functions. R.I. Gen. Laws Ann. § 23-4-15.

ACCESSIBILITY: Death certificate - R.I. Gen. Laws Ann. § 23-3-16: death certificate filed with local registrar. Unlawful to permit inspection of vital statistics records except as authorized by regulation. R.I. Gen. Laws Ann. § 23-3-23. No statute could be found as to general accessibility of public records.
Reports - R.I. Gen. Laws Ann. § 23-4-3(vi): complete records to be kept by State medical examiner's office. Copies shall be delivered to the Attorney General and copies of written determinations of causes of death shall be made available for public inspection.

INFANT DEATH: No statutory indication.

NOTE: Commission, Director of Health, Attorney General, and Superintendent of State Police, or their designees, are ex officio members; President of the Rhode Island Medical Society, President of the Rhode Island Society of Pathologists, President of the Rhode Island Bar Association, Vice-President of the Brown Division of Biological and Medical Science, President of the Rhode Island Funeral Directors Association, or designees, and two citizens appointed by the Governor for a term of three years. R.I. Gen. Laws Ann. § 23-4-6(c). Office of medical examiners is an arm of the Department of Health. R.I. Gen. Laws Ann. § 23-4-2.

SOUTH CAROLINA

TITLE: A.) County coroner. S.C. Code Ann. § 17-51; B.) County medical examiners (counties of Greenville and Charleston). S.C. Code Ann. § 17-163.

TERM: A.) Four years. S.C. Code Ann. § 17-56; B.) No statutory indication.

APPOINTMENT: A.) Elected at general election. S.C. Code Ann. § 17-51. Coroners may appoint deputies. S.C. Code Ann. § 17-59; B.) Appointed by medical examiners commission. S.C. Code Ann. § 17-163.[15]

QUALIFICATIONS: A.) No statutory indication; B.) Skilled physician or pathologist. S.C. Code Ann. § 17-163.

SUBJECT DEATHS: A.) Whenever a body is found dead and an investigation or inquest is deemed advisable. S.C. Code Ann. § 17-91; B.) Where any person dies as a result of violence, apparent suicide, when in apparent good health, unattended by a physician, or in any suspicious or unusual manner, or while an inmate of a penal or correctional institution, or stillbirths not attended by a physician. S.C. Code Ann. § 17-166.

PROCEDURE: A.) Coroner or magistrate acting as coroner to go to the body only when an investigation or inquest is deemed advisable. Inquest held if coroner or magistrate acting as coroner believes a living person to whom blame for the death attaches. Otherwise, all further inquiry is dispensed with. S.C. Code Ann. § 17-91. Two citizens must request an inquest in writing before coroner may hold one. S.C. Code Ann. § 17-94. Coroner may order an autopsy or post mortem examination performed to ascertain the cause of death. S.C. Code Ann. § 17-90. Four alternative causes of death to be determined at preliminary investigation: a) from natural cause, b) at the deceased's own hand, c) from an act of God or d) from mischance without blame on the part of another person. S.C. Code Ann. § 17-92. See S.C. Code Ann. § 17-94, et seq. for inquest procedure. For various payment schedules for physicians, see S.C. Code Ann. §§ 27-633, 27-634, 27-634.1, 27-635, 27-635.1; B.) The county medical examiner or any deputy medical examiner shall have the power to determine that an autopsy shall be made in addition to the powers vested in other law enforcement officials to order an autopsy. S.C. Code Ann. § 17-165. The county medical examiner shall make immediate inquiry into the cause and manner of death and shall reduce his findings to writing on forms provided for this purpose retaining one copy for his files and forwarding one copy to the coroner. In the case of violent death, one copy shall be forwarded to the county solicitor of the county in which the death occurred. S.C. Code Ann. § 17-166.

ACCESSIBILITY: Death certificate - S.C. Code Ann. § 1-20.2: under the provisions of this section next of kin have access to death certificates, however is limited to certified copy which includes medical certification. This provision is supplemented by rules and regulations governing vital statistics in South Carolina, Disclosure of Data: certified copies, S.C. Code Ann. § 13.
Reports - S.C. Code Ann. § 17-92: findings of preliminary investigation before inquest shall be filed in the clerk's office of the county court. Coroner to keep "The Coroner's Book of Inquisitions", which shall be public property. S.C. Code Ann. § 17-128. S.C. Code Ann. § 17-168 provides that medical examiners shall furnish copies of records upon request of any party to whom the cause of death is a material issue.

INFANT DEATH: No statutory indication.

NOTE: Magistrate may act as coroner

when coroner is absent. S.C. Code Ann. § 17-62. Only one deputy coroner is appointed by coroner of Charleston County. S.C. Code Ann. § 17-72. Charleston County to provide office for coroner. S.C. Code Ann. § 17-73. Coroners are primarily judicial officers responsible for taking inquests. S.C. Code Ann. § 17-96.

SOUTH DAKOTA

TITLE: County coroner. S.D. Comp. Laws Ann. Const., Art. 9, §§ 1-3.

TERM: Local provisions. S.D. Comp. Laws Ann. Const., Art. 9, §§ 1-3.

APPOINTMENT: Elected at general election. S.D Comp. Laws Ann. § 12-2-2.

QUALIFICATIONS: No statutory indication.

SUBJECT DEATHS: Death by unlawful means. S.D. Comp. Laws Ann. § 23-14-1. Death without medical attendance. S.D. Comp. Laws Ann. § 34-25-21. Deaths by apparent violence, suicide, or motor vehicle, or industrial accident. S.D. Comp. Laws Ann. § 34-25-22.1 (blood samples required).

PROCEDURE: The coroner shall hold an inquest. S.D. Comp. Laws Ann. § 23-14-1. Magistrate to act as coroner when coroner is absent. S.D. Comp. Laws Ann. § 23-14-2. Physicians or surgeons may be summoned to conduct an examination when either the coroner or inquest jury deem it requisite. S.D. Comp. Laws Ann. § 23-14-9. Coroner or State's attorney may authorize a dissection for purposes of the inquest. S.D. Comp. Laws Ann. § 34-26-5, § 23-13-8. If coroner is a physician or surgeon, he may perform the autopsy. County to pay for autopsy out of general funds with the approval of the board of county commissioners. S.D. Comp. Laws Ann. § 23-13-9. In deaths without medical attendance, the coroner must be notified and the coroner must complete the medical certificate from the statement of persons having knowledge of the facts. S.D. Comp. Laws Ann. § 34-25-21. In deaths mentioned in S.D. Comp. Laws Ann. § 34-25-22.1, the coroner shall take or cause to be taken blood samples and transmit them to the State chemical laboratory. S.D. Comp. Laws Ann. § 34-25-22.1.

ACCESSIBILITY: Death certificate - S.D. Comp. Laws Ann. § 34-25-25: the funeral director is to file the death certificate with the local registrar. There is a general statute making it unlawful to disclose vital statisitics records information except according to statute or regulation. S.D. Comp. Laws Ann. § 34-25-57.1.
Reports - S.D. Comp. Laws Ann. § 23-6-17: coroner must submit to the director of the Bureau of Criminal Statistics report and information regarding autopsies, inquests and coroner's jury verdicts. Order of court necessary for public access to records of the director of the Bureau of Criminal Statistics. Bureau of Criminal Statistics, or as expressly authorized by statute, or in connection with criminal investigation or identification. S.D. Comp. Laws Ann. § 23-6-14.

INFANT DEATH: No statutory indication.

NOTE: See S.D. Comp. Laws Ann. Const., Art. IX, Historical Note for abolition of Constitutional status of county officers.

TENNESSEE

TITLE: A.) Chief medical examiner; B.) County coroner; C.) County medical examiner (advice and consent covered by generally the same provisions).

TERM: A.) No statutory indication; B.) Two years. Tenn. Code Ann. § 8-901, Tenn. Code Const., Art. 7, § 1; C.) No statutory indication.

APPOINTMENT: A.) Chief medical examiner appointed by the commissioner of public health, with the approval of the Governor. Tenn. Code Ann. § 38-702; B.) Elected by justices of the peace of county court. Tenn. Code Ann. § 8-901; C.) County medical examiners elected quarterly by county court of each county except those of 300,000 - 500,000. Tenn. Code Ann. § 38-704.

QUALIFICATIONS: A.) Must be a physician licensed, or eligible to be licensed to practice medicine and surgery in Tennessee. Should preferably be a pathologist certified by the American Board of Pathology or eligible for such certification, and should have interest and/or training in forensic medicine. Tenn. Code Ann. § 38-703; B.) No statutory indication; C.) County medical examiner must be licensed medical doctor or doctor of osteopathy, and is elected from a list submitted by the county medical society. Tenn. Code Ann. § 38-704.

SUBJECT DEATHS: A.) Death of any person from sudden violence or by casualty or by suicide, or suddenly when in apparent health, or when found dead, or in prison, or in any suspicious, unusual, or unnatural manner, or where the body is to be cremated. Tenn. Code Ann. § 38-708. Also, deaths without medical attendance. Tenn. Code Ann. § 53-439(3); B.) See NOTE below; C.) Same as A.)

PROCEDURE: County medical examiner to be notified. Tenn. Code Ann. § 38-708. County medical examiner to make an investigation and submit a copy of the report to 1) county coroner, 2) chief medical examiner, 3) own files, and 4) to the district Attorney General if foul play is suspected or if the county medical examiner deems an autopsy advisable. Tenn. Code Ann. § 38-709. Only the district Attorney General can order an autopsy when recommended by the coroner or county medical examiner, and then only when homicide is involved or suspected. Tenn. Code Ann. § 38-706. However, county medical examiner may remove blood or other body fluids in lieu of autopsy, when he deems this advisable. If district Attorney General orders autopsy, county medical examiner shall notify the chief medical examiner, and then authorize a pathologist to perform the autopsy. Report of autopsy go to 1) division of post mortem examinations, 2) district Attorney General, and 3) the county medical examiner. Tenn. Code Ann. § 38-709. Cost of autopsy borne by the State. Tenn. Code Ann. § 38-704. Pathologist fees given in Tenn. Code Ann. § 38-705. Chief medical examiner apparently has no independent authority to investigate deaths or conduct autopsies.

ACCESSIBILITY: Death certificates - although original records of death permanently filed in the Tennessee Department of Public Health, vital records are considered confidential, certified copies are issued to those persons and organizations who can establish a legal right to the data. Tenn. Code Ann. § 53-415. Reports - Tenn. Code Ann. § 38-710: reports of county medical examiners, toxicological reports, and autopsy reports are public documents; obtainable upon payment of a fee.

INFANT DEATH: No statutory indication.

NOTE: Medical examiner provisions not to interfere with coroner function, but no inquest is to interfere with medical examiner functions. Tenn. Code Ann. § 38-709. Medical examiner provisions not to apply to counties of 300,000 - 500,000. Tenn. Code Ann. § 38-714. Coroner may appoint deputy coroner. Tenn. Code Ann. § 8-905. Coroner function: through the enactment of Tenn. Code Ann. Tit. 38, Ch. 7, the duties of the coroner have been reduced to primarily a judicial nature. All medico-legal aspects are incorporated in the medical examiner system.

TEXAS
(A)

TITLE: County medical examiner in counties of 500,000 or more. Tex. Rev. Civ. Stat., Art. 49, § 25.1. Two or more counties may join together as a medical examiner's district with one examiner. Tex. Rev. Civ. Stat. Art. 49.25 § 1-a.

TERM: The medical examiner shall serve at the pleasure of the commissioners court. Tex. Rev. Civ. Stat. Art. 49.25, § 2.

APPOINTMENT: The commissioners court shall appoint the medical examiner. Tex. Rev. Civ. Stat. Art. 49.25, § 2. The medical examiner may employ, with the approval of the commissioners court, deputy examiners, and other needed personnel. Tex. Rev. Civ. Stat. Art. 49.25, § 3.

QUALIFICATIONS: Medical examiner must be a licensed physician. To the greatest extent possible, the medical examiner should have experience in pathology and other medico-legal sciences. Tex. Rev. Civ. Stat. Art. 49.25, § 2.

SUBJECT DEATHS: 1) When a person shall die within twenty-four hours after admission to a hospital or institution or in prison or in jail; 2) When any person is killed; or from any cause dies an unnatural death, except under sentence of the law; or dies in the absence of one or more good witnesses; 3) When the body of a human being is found and the circumstances of his death are unknown; 4) When the circumstances of the death of any person are such as to lead to suspicion the he came to his death by unlawful means; 5) When any person commits suicide, or suicide is suspected; 6) When a person dies unattended; 7) When a person dies attended, but the physician is not certain as to the cause of death. Tex. Rev. Civ. Stat. Art. 49.25, § 6. See Tex. Rev. Civ. Stat. § 6a for death involving an organ donor.

PROCEDURE: The medical examiner and his deputy are authorized, and it is their duty, to hold inquests with or without a jury in subject deaths. Tex. Rev. Civ. Stat. Art. 49.25, § 6. The death must be reported to the office of the medical examiner, either directly or by a city or county police department. Tex. Rev. Civ. Stat. Art. 49.25, § 7. As a result of the initial investigation, if the cause of death can be established beyond a reasonable doubt, the medical examiner shall file a report with the district attorney, criminal district attorney, or county attorney. If the medical examiner deems an autopsy necessary, or the district attorney, criminal district attorney, or county attorney requests one, the medical examiner or authorized deputy shall immediately perform one. Where a full autopsy is not required, the medical examiner may remove blood or other samples of body fluids, etc. The medical examiner or deputy may use the facilities of any city or county hospital or other such facilities as are made available. Upon completion of the autopsy, the medical examiner shall file a report with the district attorney, criminal district attorney, or county attorney. Tex. Rev. Civ. Stat. Art. 49.25, § 9. See Tex. Rev. Civ. Stat. Art. 49.25, § 10 for bodies which are interred or about to be cremated.

ACCESSIBILITY: Death certificate - Tex. Rev. Civ. Stat. Art. 49.25, § 11: medical examiner shall keep full records of deaths investigated, including autopsy reports, and shall make and issue a death certificate. Copies delivered to the district attorney, criminal district attorney, or county attorney in any case where further investigation is advisable. Person in charge of internment files the death certificate with the local registrar. Tex. Rev. Civ. Stat. Art. 4477, Rule 40a. Subject to the regulations of the State Department of Health controlling the accessibility of vital records, the State Registrar shall, upon request, supply to any properly qualified applicant a certified copy of a record. Tex. Rev. Civ. Stat. Art. 4477, Rule 54a.
Reports - Tex. Rev. Civ. Stat. Art. 49.22: Justice of the Peace to deliver records of the inquest proceedings to the clerk of the district court. Autopsy reports are to be filed by the physician performing the autopsy with office designated in autopsy order. Copy furnished to duly authorized person for $5. Tex. Rev. Civ. Stat. Art. 4447n. Records are public. Tex. Rev. Civ. Stat. Art. 49.25, § 11, Art. 6252, § 17a.

INFANT DEATH: No statutory indication.

NOTE: All citations are from the Code of Criminal Procedure. Medical examiner to perform duties of Justices of the Peace of the county in investigations and inquests in counties where commissioners courts have adopted the medical examiner system. Tex. Rev. Civ. Stat. Art. 49.25, § 12.

(B)

TITLE: Justice of the Peace. Tex. Rev. Civ. Stat. Art. 49.01. See Tex. Rev. Civ. Stat. Art. 49.25, § 12.

TERM: As Justice of the Peace (four years). Tex. Rev. Civ. Stat. Const., Art. 5, § 18.

APPOINTMENT: As Justice of the Peace, Tex. Rev. Civ. Stat. Const., Art. 5, § 18.

QUALIFICATIONS: As Justice of the Peace.

SUBJECT DEATHS: 1) When any person dies in prison or in jail; 2) When any person is killed, or from cause dies an unnatural death except under sentence of the law; or dies in the absence of one or more good witnesses; 3) When the body of a human being is found, and the circumstances of his death are unknown; 4) When the circumstances of the death of any person are such as to lead suspicion that he came to his death by unlawful means; 5) When any person commits suicide or the circumstances of his death are such as to lead to suspicion that he committed suicide; 6) When a person dies without having been attended by a duly licensed and practicing physician and the local health officer or registrar required to report the cause of death do not know the cause of death; 7) When the attending physician does not know the cause of death. Tex. Rev. Civ. Stat. Art. 49.01.

PROCEDURE: It is the duty of the Justice of the Peace to hold inquests, with or without a jury. Tex. Rev. Civ. Stat. Art. 49.01. Autopsy required on bodies to be cremated, unless the Justice of the Peace determines that no autopsy is necessary, or the death was caused by a pestilential disease. Tex. Rev. Civ. Stat. Art. 49.02. Justice of the Peace may call in the County Health Officer or a licensed physician for an opinion as to whether an autopsy should be performed. If he deems one necessary, the Justice of the Peace shall request the County Health Officer or a licensed physician trained in pathology to perform the autopsy. Commissioners court to pay the physician up to $300. Justice of the Peace may order blood or body fluids removed instead of requesting an autopsy. Tex. Rev. Civ. Stat. Art. 49.03. Commissioners court may pay up to $300 for the Justice of the Peace to call in a toxicologist to examine body samples to determine if death occurred by poisoning. Tex. Rev. Civ. Stat. Art. 49.06. The Justice of the Peace shall act upon information given him by any credible person or upon facts within his own knowledge.

Tex. Rev. Civ. Stat. Art. 49.07. The Justice of the Peace may issue subpoenas to compel witnesses to attend the inquest. Tex. Rev. Civ. Stat. Art. 49.09. Justice of the Peace to keep full records of inquests. Tex. Rev. Civ. Stat. Art. 49.13.

ACCESSIBILITY: Same as medical examiner system.

INFANT DEATH: No statutory indication.

NOTE: See Tex. Rev. Civ. Stat. Art. 49.05 for consent to autopsy be licensed physician. Article 4447n is from the Health Code. All other citations are from the Code of Criminal Procedure.

UTAH

TITLE: State medical examiner. Utah Code Ann. § 26-20-4.

TERM: He shall serve at the will of the Director of the Division of Health. Utah Code Ann. § 26-20-4.

APPOINTMENT: Appointed by the Director of the Division of Health, with the approval of the board of health. Utah Code Ann. § 26-20-4.

QUALIFICATIONS: Licensed to practice medicine in Utah, and a qualified pathologist. Utah Code Ann. § 26-20-4.

SUBJECT DEATHS: 1) Deaths by violence, gunshot, suicide, or accident, except highway accidents; 2) Sudden death while in apparent health; 3) Unattended deaths; 4) Deaths under suspicious or unusual circumstances; 5) Deaths resulting from poisoning or overdose of drugs; 6) Deaths resulting from diseases that may constitute a threat to public health; 7) Deaths resulting from disease, injury, toxic effect or unusual exertion incurred within the scope of the deceased's employment; 8) Deaths resulting while the deceased was in prison, jail, in police custody for any reason or in the State hospital, or in a detention or medical facility operated for the treatment of the mentally ill or emotionally disturbed persons. Utah Code Ann. § 26-20-7.

PROCEDURE: A law enforcement agency should be notified to make an investigation to determine whether there exists any criminal responsibility for the death. If there is a subject death involved, the law enforcement agency should notify the county attorney and the medical examiner. Utah Code Ann. § 26-20-8. Upon notification, the medical examiner shall assume custody of the body. Utah Code Ann. § 26-20-9. Medical examiner or his designated representative shall certify the cause of his subject deaths. Utah Code Ann. § 26-20-10. Autopsies shall be performed to aid the discovery and prosecution of crimes, to protect the innocent persons accused of crime, to disclose hazards to public health by either a communicable disease, occupational disease, or by dangerous drugs, chemicals, or food. They will also be performed to aid in the administration of civil justice. Utah Code Ann. § 26-20-13. If the medical examiner has reason to believe that there may be criminal responsibility for the death, he is to notify the county attorney, or other law enforcement agency responsible for further investigation. Utah Code Ann. § 26-20-14. Authority to order autopsies is shared by the medical examiner and county attorney. Utah Code Ann. § 26-20-6.

ACCESSIBILITY: Death certificate - Utah Code Ann. § 26-15-17: person in charge of internment files the death certificate with the local registrar. Applicants for inspection of records must have a direct, tangible, legitimate interest, which is defined in Utah Code Ann. § 26-15-26(2).
Reports - Utah Code Ann. § 26-20-11: all reports initially go to the medical examiner. Utah Code Ann. § 26-20-17 provides that the medical examiner shall have the responsibility of maintaining the confidentiality of his records which are released to requesting law enforcement officials. Accessibility apparently governed by written rules issued by the Board of Health.

INFANT DEATH: Definition of SIDS. Utah Code Ann. § 26-20-2(8). SIDS is a subject death. Utah Code Ann. § 26-20-7(8). SIDS must be certified by the medical examiner. Utah Code Ann. § 26-25-17(3)(h).

NOTE: Medical examiner committee established by statute. It is an advisory body to the board of health and shall advise the board of health in all matters relating to the medical examiner program, including recommendations concerning rules and regulations. Utah Code Ann. § 26-20-3. County commissioners may appoint medical examiners for thei respective counties. Utah Code Ann. § 26-20-5. "Medical Examiner" means the State medical examiner or a deputy appointed by him. Utah Code Ann. § 26-20-2(5).

VERMONT

TITLE: Chief medical examiner and regional medical examiners.

TERM: For the chief medical examiner, no statutory indication. Regional medical examiners shall serve indefinite terms at the pleasure of the chief medical examiner. Vt. Stat. Ann. Tit. 18, § 508.

APPOINTMENT: State board of health may contract with any person, institution, or State department for the performance of any or all of the duties of the chief medical examiner. Vt. Stat. Ann. Tit. 18, § 507. Chief medical examiner shall appoint the regional medical examiners.

QUALIFICATIONS: Established by State Board of Health. Vt. Stat. Ann. Tit. 18, § 507. Regional medical examiners must be licensed doctors of medicine or osteopathy.[16] Vt. Stat. Ann. Tit. 18, § 508.

SUBJECT DEATHS: When a person dies from violence, or suddenly when in apparent good health or when unattended by a physician or a recognized practitioner of a well-established church, or by casualty, or by suicide or as a result of injury or when in jail or prison, or any mental institution, or in any unusual, unnatural or suspicious manner, or in circumstances involving a hazard to public health, welfare or safety. Vt. Stat. Ann. Tit. 18, § 5205(a).

PROCEDURE: Regional medical examiner must be notified, and he in turn must notify the State's attorney, who shall then be in charge of the body. Vt. Stat. Ann. Tit. 18, § 5205(a). The medical examiner and a designated law enforcement officer shall then make a preliminary investigation.[17] Vt. Stat. Ann. Tit. 18, § 5205(b). Medical examiner and law enforcement officer each to submit a report to the State's attorney and the chief medical examiner. If the cause of death is uncertain, the medical examiner is to immediately advise the State's attorney or the chief medical examiner. Vt. Stat. Ann. Tit. 18, § 5205(c). State's attorney or the chief medical examiner may order an autopsy to be performed, if either deem it necessary and in the interest of public health, welfare and safety, or in the furtherance of the administration of the law. Autopsy to be performed by or under the direction of the chief medical examiner. Attorney General to be notified by the State's attorney before the autopsy is performed. Vt. Stat. Ann. Tit. 18, § 5205(f).

ACCESSIBILITY: Death certificate - Vt. Stat. Ann. Tit. 18, § 5205(f); chief medical examiner shall complete and sign death certificate. Secretary of State shall provide copies of vital records. Vt. Stat. Ann. Tit. 32, § 1715. Town and city clerks shall also provide: Vt. Stat. Ann. Tit. 32, §§ 1711 through 1714.
Reports - Vt. Stat. Ann. Tit. 18, § 5205(f): chief medical examiner, after autopsy, shall submit a report to the State's attorney and the Attorney General. No statutory provision exists relative to the accessibility of reports by next of kin.[18]

INFANT DEATH: No statutory indication.[19]

NOTE: Undertakers and embalmers to notify the State's attorney when body has evidence of physical violence or an unlawful act. Vt. Stat. Ann. Tit. 18, § 5205(e). Superior court judge or Attorney General may order the chief medical examiner to perform an autopsy upon petition of a State's attorney. Vt. Stat. Ann. Tit. 13, § 5162.

VIRGINIA

TITLE: A.) Chief medical examiner. Va. Code Ann. § 32-31.10; B.) County or city medical examiners. Va. Code Ann. § 32-31.16.

TERM: A.) Shall continue in office to serve at the pleasure of the Commissioner of Health and the State Board of Health. Va. Code Ann. § 32-31.10; B.) Three years. Va. Code Ann. § 32-31.16.

APPOINTMENT: A.) Appointed by the Commission with the approval of the board. Va. Code Ann. § 32-31.10; B.) Appointed by the chief medical examiner from list submitted by the local medical society, or is no list is submitted by the local medical society, appointed directly by the chief medical examiner. Va. Code Ann. § 32-31.16.

QUALIFICATIONS: A.) Skilled pathologist eligible to be licensed as a medical doctor. Va. Code Ann. § 32-31.10; B.) Licensed doctor of medicine. Va. Code Ann. § 32-31.16.

SUBJECT DEATHS: Deaths from violence, or suddenly when in apparent health, or when unattended by a physician, or in prison, or in any suspicious, unusual, or unnatural manner. Va. Code Ann. § 32-31.17.

PROCEDURE: County or city medical examiner must be notified. Va. Code Ann. § 32-31.17. Medical examiner to take charge of the body, conduct an investigation, and make a report on forms prescribed by the chief medical examiner. Medical examiner to keep one copy, send another to the chief medical examiner, and also sent one to the attorney for the Commonwealth of the county or city involved. Va. Code Ann. § 32-31.18. If in the opinion of the medical examiner or the chief medical examiner it is advisable and in the public interest that an autopsy be made, or if one is required by the attorney for the Commonwealth or by the judge of the circuit or corporation court, the chief medical examiner or designated pathologist or toxicologist shall perform an autopsy.[20] A full report shall be filed with the medical examiner and the chief medical examiner, and also with the attorney for the Commonwealth, if the latter requests a report, or the medical examiner or chief medical examiner think he should have a report. Va. Code Ann. § 32-31.19. Facilities and personnel are provided by the State Health Commissioner. Va. Code Ann. §§ 32-31.12, 32-31.15, 32-31.20.

ACCESSIBILITY: Death certificate - under regulations issued by the State Board of Health, the State Registrar or the county or city registrar is required, upon request, to disclose data or issue certified copies of death certificates or information when satisifed that the applicant for such record has a direct and tangible interest in the content of such record is necessary for the determination or protection of personal or property rights. Va. Code Ann. § 32-353.6, § 32-353.7, Regulations Governing Vital Statistics, § 11. Reports - Under Va. Code Ann. § 2.1-340, all official records, except as otherwise specifically provided by law, are required to be open to inspection and copying by any citizen of Virginia during the regular office hours of the custodian of such records. Although the applicability of such law to the records in the Office of the Chief Medical Examiner has not been officially construed, it has long been the policy of such office to make its official reports, including autopsy reports, available to next of kin upon their request, unless for good cause shown the attorney for the Commonwealth of the appropriate law enforcement agency requests that such disclosures not be made. (Policy Statements, Medical Examiner, May 15, 1974)

INFANT DEATH: No statutory indication.

WASHINGTON

TITLE: County coroner. However, in counties of the 4th, 5th, 6th, 7th, 8th, and 9th classes, no coroner shall be elected and the prosecuting attorney shall be the ex officio coroner. Wash. Rev. Code § 36.16.030.

TERM: Unspecified in Wash. Rev. Code Const., Art. XI, § 4 for the county prosecuting attorney. For smaller county, no statutory indication.

APPOINTMENT: Elected by the people of the county; Wash. Rev. Code § 36.16.030 - in counties of the 1st, 2nd, and 3rd class. Counties of the 4th, 5th, 6th, and 7th class, the prosecuting attorney is elected; Wash. Rev. Code Const., Art. XI, § 4.

QUALIFICATIONS: No statutory indication.

SUBJECT DEATHS: Suddenly when in apparent good health without medical attendance within the thirty-six hours preceding death; where the circumstances of death indicate death was caused by unnatural or unlawful means; where death occurs under suspicious circumstances; where a coroner's autopsy or post mortem examination or coroner's inquest is to be held (see Wash. Rev. Code § 36.24.020); where death results from: unknown or obscure causes, violence, within one year following an accident, drowning, hanging, burns, electrocution, gunshot wounds, stabs or cuts, lightning, starvation, radiation, exposure, alcoholism, narcotics or other addictions, tetanus, strangulations, suffocation, or smothering; where death is due to premature birth or stillbirth, or a virulent contagious disease, or suspected contagious disease which may be a public health hazard; where death results from alleged rape, carnal knowledge, or sodomy; where death occurs in a jail or prison; where a body is found dead or is not claimed by relatives or friends. Wash. Rev. Code Ann. § 68.08.010.

PROCEDURE: The coroner has jurisdiction over subject deaths, and he may move such bodies to the morgue. Wash. Rev. Code § 68.08.010. It is a misdemeanor not to notify the coroner of subject deaths. Wash. Rev. Code § 68.08.020. The coroner, in his discretion, may make or cause to be made by a competent pathologist, toxicologist, or physician, an autopsy or post mortem examination in any case in which the coroner has jurisdiction over the body. Wash. Rev. Code § 68.08.100. County to bear costs of autopsy. Wash. Rev. Code § 68.08.104.

ACCESSIBILITY: Death certificate - Certificates are required to be filed with the local registrars upon certification of death. Wash. Rev. Code § 70.58.160. Public inspection and copying of records pursuant to procedures in the Wash. Administrative Code is provided for in Wash. Rev. Codes

§§ 42.17.250 through 42.17.340. Reports - under Washington law, reports and records of autopsies or post mortems are confidential, except to the prosecuting attorney or law enforcement agencies having jurisdiction, or to the Department of Labor and Industries in cases in which the department has requested that an autopsy be performed. Any party by showing just cause may petition the court to have an autopsy and the results of such autopsy be made known to such party at his own expense. Wash. Rev. Code § 68.08.105. However, under current practice, autopsy reports and consultations are available to the next of kin.

INFANT DEATH: The coroner may with the approval of the University of Washington and with the consent of a parent or guardian deliver any body of a deceased person under the age of three years over which he has jurisdiction to the University of Washington Medical School for the purpose of having an autopsy made to determine the cause of death. Wash. Rev. Code § 68.08.100. University of Washington Medical School to bear cost of autopsy.[21] Wash. Rev. Code § 68.08.104.

NOTE: Seattle has an appointive Medical Examiner System (see Childs report). See Wash. Rev. Code § 36.24.010 to § 36.24.180 for coroner inquest. See Wash. Rev. Code § 68.08.107 for State toxicological lab and State toxicologist.

WEST VIRGINIA

TITLE: A.) Chief medical examiner. W. Va. Code Ann. § 61-12-3; B.) County medical examiners. W. Va. Code Ann. § 61-12-7.

TERM: A.) Serves at the will and pleasure of the commission. W. Va. Code Ann. § 61-12-3; B.) Three years. W. Va. Code Ann. § 61-12-7.

APPOINTMENT: A.) Appointed by the commission. W. Va. Code Ann. § 61-12-3; B.) Appointed by the commission. W. Va. Code Ann. § 61-12-7. The chief medical examiner may appoint assistants where needed. W. Va. Code Ann. § 61-12-7.

QUALIFICATIONS: A.) Licensed physician in West Virginia, a diplomate or eligible for certification by the American Board of Pathology or American Osteopathic Board of Pathology. W. Va. Code Ann. § 61-12-3; B.) Qualified physicians licensed in West Virgina. W. Va. Code Ann. § 61-12-7.

SUBJECT DEATHS: By violence, or by apparent suicide, or suddenly when in apparent health, or when unattended by a physician or when an inmate of a public institution not hospitalized therein for organic disease, or from some disease which might constitute a threat to public health, or in any suspicious, unusual, or unnatural manner.

PROCEDURE: Medical examiner to be notified by physician in attendance, by any law enforcement officer having knowledge of such death, or by the funeral director, or by any other person present. (Misdemeanor not to notify.) The medical examiner shall take charge of the body, make an investigation, reduce his findings to writing, and submit copies of his report to the chief medical examiner, the prosecuting attorney, and other attorney involved in criminal or civil proceedings surrounding the death, and retain a copy for himself. All forms are prescribed. W. Va. Code Ann. § 61-12-8. The following may determine that an autopsy is advisable and in the public interest or request one: the chief medical examiner, the medical examiner, the prosecuting attorney, or judge of the circuit court of any other court having criminal jurisdiction. The autopsy is to be performed by the chief medical examiner or a member of his staff, or a competent pathologist designated by the chief medical examiner. A medical examiner who is a qualified pathologist may also perform the autopsy and receive additional fees for so performing. W. Va. Code Ann. § 61-12-4, or other existing facilities, W. Va. Code Ann. § 61-12-6, shall be used. Also see W. Va. Code Ann. § 61-12-12.

ACCESSIBILITY: Death certificate - when death occurs in any manner subject to investigation, the medical examiner is required to investigate the cause of death and complete and sign the medical certification on the death certificate. Copies of all records or information in the office of medical examinations are required to be furnished, upon request, to any party to whom the cause of death is a material issue.
Under West Virginia law, it is unlawful for any person to permit inspection or disclosure of confidential information contained in records of death, or to copy or issue a copy of all or any part of such confidential information except as authorized by law or by order of a court having jurisdiction or by rule and regulation duly adopted by the State board of health. Current regulations provide that the State Registrar is required to permit the inspection of a record only when he is satisfied that the applicant for such record has a direct and tangible interest in the

content of the record and that the information contained in the record is necessary for the determination of personal or property rights. W. Va. Code Ann. § 16-5-27.
Reports - full records of autopsy report to be filed with the office of medical examinations. Prosecuting attorney may get a copy of the report. Full records of investigated deaths to be kept by the office of medical examinations. Copies may be furnished to any party to whom the cause of death is a material issue. W. Va. Code Ann. § 61-12-10.

INFANT DEATH: No statutory indication.

NOTE: Commission on Post Mortem Examinations has six members: a member of the West Virginia Department of Public Safety, one qualified to practice law before the West Virginia Superior Court of Appeals, licensed funeral director, licensed M.D. who is a surgeon, licensed M.D. who is an osteopath, representative of the public. W. Va. Code Ann. § 61-12-1. Rules and regulations promulgated by the commission are for administrative purposes only and shall not have the force and effect of law. W. Va. Code Ann. § 61-12-2. Chief medical examiner may employ assistants, pathologists, toxicologists, etc. as he needs them. All persons employed by the chief medical examiner are responsible to him. W. Va. Code Ann. § 61-12-3. See also W. Va. Code Ann. § 61-12-6. See W. Va. Code Ann. § 61-12-14 for appointment and function of county coroners.

WISCONSIN

TITLE: A.) Coroners. Wis. Stat. Const., Art. VI, § 4; B.) Medical examiners in counties of over 500,000 or where desired. Wis. Stat. Const., Art. VI, § 4.

TERM: A.) Elected every two years. Wis. Stat. Const., Art. VI, § 4; B.) No statutory indication.

APPOINTMENT: A.) Elected; B.) Appointed by county board of supervisors or county board. Wis. Stat. § 59.34(1).

QUALIFICATIONS: A.) No statutory indication; B.) No statutory indication, but is probably a physician, by inference.

SUBJECT DEATHS: a) All deaths in which there are unexplained, unusual, or suspicious circumstances. b) All homicides. c) All suicides. d) All deaths following an abortion. e) All deaths due to poisoning, whether homicidal, suicidal, or accidental. f) All deaths following accidents, whether the injury is or is not the primary cause of death. g) When there was no physician, or accredited practitioner of a bona fide religious denomination relying upon prayer or spiritual means for healing in attendance within thirty days preceding death. h) When a physician refuses to sign the death certificate. Wis. Stat. § 979.20(1).

PROCEDURE: The medical examiner or coroner must be notified. Wis. Stat. § 979.20(1). Sanctions for failure to notify. Wis. Stat. § 979.20(2). In general, if criminal means are suspected, the coroner or medical examiner must hold an inquest. Ch. 979 gives most procedural matters. Coroner may subpoena physicians or surgeons or order the conducting of an autopsy. Wis. Stat. § 979.121. Inquest procedures applicable to coroner equally applicable to medical examiners. Wis. Stat. § 979.15.

ACCESSIBILITY: Death certificate - Wis. Stat. § 69.41: coroners and medical examiners file death certificates after inquests.
The State Registrar or the local registrar of any city is required, upon request, to furnish any applicant a certified copy of any record of death in his possession. Wis. Stat. §§ 69.02, 69.23.
Reports - Wis. Stat. § 979.17: medical examiner to keep full records at office at county seat provided by the county board. All records of coroners and medical examiners may with proper care be examined or copied by any person subject to such orders or regulations as may be prescribed.

INFANT DEATH: No statutory indication.

NOTE: Medical examiners may have assistants as the county board allows. Wis. Stat. § 59.34(1). Coroners may have deputies. Wis. Stat. § 59.365(1).

WYOMING

TITLE: County coroner.

TERM: Four years. Wyo. Stat. Ann. § 7-77.

APPOINTMENT: Elected. Wyo. Stat. Ann. § 7-77.

QUALIFICATIONS: No statutory indication.

SUBJECT DEATHS: Death by unlawful means, deaths by cause unknown, or violent deaths. Wyo. Stat. Ann. § 7-81.

PROCEDURE: The coroner shall hold an inquest only in subject death cases. See Wyo. Stat. Ann. § 7-81, et seq. for inquest procedures. If the coroner or jury shall deem it requisite, he may summon one or more physicians or surgeons to make a scientific examination. Wyo. Stat. Ann. § 7-90. Coroner gets daily $15 fee and mileage for inquests. Wyo. Stat. Ann. § 7-91. Physician or surgeon gets $25 for one half day testimony, and $75 for a post mortem or autopsy, provided the autopsy be actually made. Wyo. Stat. Ann. § 1-196.

ACCESSIBILITY: Death certificate - Wyo. Stat. Ann. § 35-79.18(c): the non-medical coroner must not diagnose a case without the assistance of a competent physician. Coroner or health officer to sign death certificate in subject deaths.
Under Wyoming law, it is unlawful for any person to permit inspection or disclosure of information contained in vital records, or to copy or issue a copy of all or any part of such records except as authorized by regulations issued by the division of health and medical services. Current regulations provide that the State Registrar of vital records or the custodian of permanent local records may not permit the inspection or disclosure of information contained in vital records unless he is satisfied that the applicant has a direct and tangible interest in such information. Wyo. Stat. Ann. § 35-79.18; Rules and Regulations, Vital Statistics Services, Chapter XIV, § 1.
Reports - Under Wyoming law, it is unlawful for any person to permit inspection or disclosure of information contained in vital records, or to copy or issue a copy of all or any part of such records except as authorized by regulations issued by the division of health and medical services. Current regulations provide that the State Registrar of vital records or the custodian of permanent local records may not permit the inspection or disclosure of information contained in vital records, or copy or issue a copy of all or any part of such records unless he is satisfied that the applicant has a direct and tangible interest in such information. Wyo. Stat. Ann. § 18-58. Wyo. Stat. Ann. § 7-87 requires filing inquest and investigation reports with the district court.

INFANT DEATH: No statutory indication.

AMERICAN SAMOA

TITLE: No death investigation official as such.

TERM:

APPOINTMENT:

QUALIFICATIONS:

SUBJECT DEATHS: In case a dead body is found, and in case of any accidental death or death allegedly caused by unlawful means. A.S. Code Ch. 21, § 2704(a).

PROCEDURE: Death of every person is reported to the pulenuu of the village where the death occurred, and the pulenuu is to then report the death to the department of medical services which forwards the death reports to the registrar of vital statistics. A.S. Code Ch. 21, § 2702(b) and (c). In subject deaths, the pulenuu reports the death to the Attorney General for investigation, or to the local representative of the department of medical services, who is authorized to act as coroner to investigate and report his findings to the Attorney General. A.S. Code Ch. 21, § 2704. Autopsy to be performed if the Attorney General certifies in writing that autopsy is necessary for detection of possible crime, or if director of medical services certifies in writing that the autopsy is necessary for public health purposes. Autopsy to be performed by a duly licensed physician or Samoan medical officer. A.S. Code Ch. 21, § 2706.

ACCESSIBILITY: Death certificate - Death certificates are completed by the department of medical services and are available upon payment of a fee. A.S. Code Ch. 21, § 2708, Ch. 11, § 2.
Reports - No statutory indication exists relative to the accessibility of autopsy reports by next of kin. A.S. Code Ch. 1, § 2.

INFANT DEATH: No statutory indication.

CANAL ZONE

TITLE: Coroner/Health Director.

TERM: No statutory indication.

APPOINTMENT: Governor appoints coroner and such deputy coroners as may be required. C.Z. Code Tit. 6, § 4781.

QUALIFICATIONS: No statutory indication.

SUBJECT DEATHS: Death caused by violence or unlawful means, suicide, or accident or casualty; the deceased was not under the care of a physician at the time of death, or; the death was sudden or unusual or occurred under suspicious circumstances. C.Z. Code Tit. 6, § 4783.

PROCEDURE: Coroner or deputy shall investigate subject deaths, and determine and record the cause of death. The coroner or deputy coroner may order an autopsy if he deems it necessary. C.Z. Code Tit. 6, § 4783. Health director of the Canal Zone shall perform or cause to be performed a post mortem examination on bodies where 1) the cause of death cannot otherwise definitely be determined, or 2) the death may cause concern for public health. C.Z. Code Tit. 6, § 4784(a). Post mortem examinations to be performed by health director or designee if 1) the coroner or deputy has ordered an autopsy in a subject death case, or 2) there are reasonable grounds to believe that the deceased may have died from a quarantinable disease. C.Z. Code Tit. 6, § 4684(c).

ACCESSIBILITY: No statutory indication exists relative to the accessibility of either death certificates or autopsy reports to next of kin.

INFANT DEATH: No statutory indication.

NOTE: See "History" after C.Z. Code Tit. 6, § 4781, regulations are to be prescribed by the Governor, from time to time. C.Z. Code Tit. 6, § 4781.

DISTRICT OF COLUMBIA

TITLE: Chief medical examiner. D.C. Code Ann. § 11-2301.

TERM: No statutory indication.

APPOINTMENT: Via commissioner of the District of Columbia. D.C. Code Ann. § 11-2301(a).

QUALIFICATIONS: Physicians licensed in the District of Columbia and board certified in anatomic pathology. D.C. Code Ann. § 11-2301(a).

SUBJECT DEATHS: Violent death, whether apparently homicidal, suicidal, or accidental, including deaths due to thermal, chemical, electrical, or radiational injury and deaths due to criminal abortion, whether apparently self-induced or not; sudden deaths not caused by readily recognizable diseases; deaths under suspicious circumstances; deaths of persons whose bodies are to be cremated, dissected, buried at sea, or otherwise disposed of so far as to be thereafter unavailable for examination; deaths related to disease resulting from employment or to accident while employed; deaths related to disease which might constitute a threat to public health. D.C. Code Ann. § 11-2304.

PROCEDURE: Upon notice, the medical examiner must investigate any subject deaths coming to his attention. Autopsies performed if, in the opinion of the chief medical examiner or United States Attorney, the situation warrants, or if the public interests are required. No consent of kin is necessary. The chief medical examiner or deputy may perform an autopsy in the subject deaths with costs being paid by the District of Columbia.
Facilities are necessary, equipment is to be furnished by the commissioner of the District of Columbia or contractual arrangements made with local universities and hospitals. D.C. Code Ann. §§ 11-2304, 11-2306, 11-2307.

ACCESSIBILITY: Death certificate - D.C. Code Ann. §§ 6-102, 6-112 "Notes to Decisions": death certificates public records. D.C. Code Ann. § 1-244(g) authorizes collection of fees for copies of, among other things, death certificates. The only administrative requirement is apparently that an applicant must have a "proper interest" in the record requested.
Reports - D.C. Code Ann. § 11-2309 (c): any person with a legitimate interest may obtain copies of a records maintained by the chief medical examiner upon such conditions and such fees as may be prescribed by the chief medical examiner.

INFANT DEATH: No statutory indication.

GUAM

TITLE: Chief medical examiner.

TERM: Set by the commission. Guam Civ. Code § 49102.

APPOINTMENT: Named by the commission. Guam Civ. Code § 49102.

QUALIFICATIONS: Citizen or permanent resident of the United States, physician licensed in Guam, and a minimum of two years post graduate training in pathology. Guam Civ. Code § 49102.

SUBJECT DEATHS: (a) Violent deaths, whether apparently homicidal, suicidal, or accidental, including but not limited to deaths due to thermal, chemical, electrical, or radiational injury, and deaths due to criminal abortion, whether apparently self-induced or not; (b) Sudden deaths not caused by readily recognizable disease; (c) Deaths under suspicious circumstances; (d) Deaths of persons whose bodies are to be cremated, dissected, buried at sea, or otherwise disposed of so far as to be thereafter unavailable for examinations. Guam Civ. Code § 49103.

PROCEDURE: The Office of Post Mortem Examinations shall investigate all subject deaths. Guam Civ. Code § 49103. The Office may conduct autopsies for all subject deaths, plus deaths related to disease which might cause a threat to public health, and whenever an autopsy is ordered by the Attorney General or a court of competent jurisdiction. Guam Civ. Code § 49104. Guam Civ. Code § 49105 mandates the cooperation of law enforcement officials, physicians, embalmers, etc. in notifying the Office of subject deaths. The Office shall maintain a lab suitable for the performance of its medico-legal duties, and arrangements may be made with existing labs. Guam Civ. Code § 49106.

ACCESSIBILITY: Death certificate - Guam Civ. Code § 49108: office to keep full records and issue a death certificate. Reports - Guam Civ. Code § 49108: records sent to prosecuting attorney if further criminal investigation is required. Attorney General or director of Public Safety may get records. Private persons may obtain copies upon such conditions and payment of such fees as may be prescribed by the Commission provided no person with a legitimate interest therein shall be denied access thereto.

INFANT DEATH: No statutory indication.

NOTE: Commission of Post Mortem Examinations consists of Attorney General, the Director of the Department of Public Health and Social Services, President of the Guam Medical Society, and Administrator of Guam Memorial Hospital. Guam Civ. Code § 49100. Office of Post Mortem Examinations is established to be operated under the control and supervision of the Commission. Guam Civ. Code § 49101. Commission sets rules and regulations and qualifications of all personnel employed by the Office. Guam Civ. Code §§ 49101, 49107.

PUERTO RICO

TITLE: Forensic physician of Puerto Rico. P.R. Laws Ann. Tit. 18, § 698.

TERM: No statutory indication.

APPOINTMENT: Appointed by Chancellor of the University of Puerto Rico upon the recommendation of the Dean of the Puerto Rico School of Medicine. Forensic physician is also director of the Institute of Forensic Medicine. P.R. Laws Ann. Tit. 18, § 698.

QUALIFICATIONS: No statutory indication, but evidently a physician. See "History" after P.R. Laws Ann. Tit. 18, § 697.

SUBJECT DEATHS: a) As a result of unlawful acts or when suspected that a crime has been committed; b) as a result of any accident or act of violence, disregarding its nature or the lapse of time between the latter and the death, if it can reasonably be suspected that there is relation between the accident or the act of violence and the death; c) suddenly and unexpectedly while the person was relatively or apparently enjoying good health; d) within the twenty-four hours following admission of a patient to a hospital, clinic, or asylum, whether commonwealth, municipal, or private; e) while the person is in prison; f) after an abortion or premature birth; g) through suicide, or suspected as such; h) as a result of an illness, if factors alien to such illness have contributed to the death; i) as a result of poisoning, or suspected as such; j) in relation to or as a result of the occupation of the deceased; k) unexpectedly during a surgical operation or a diagnostic or therapeutic process, including deaths occurring after new or experimental therapeutic processes; l) while the patient is under anesthesia or recovering from the effects thereof; m) if caused by physical force such as electricity, heat, cold, or irradiations; n) if caused by acute alcohol intoxication; o) any death of a narcotic addict; p) any death from malnutrition, neglect or exposure to the elements, or as a result of negligence; q) in a convalescence home, asylum, or similar institution whether commonwealth, municipal, or private; r) while hospitalized in a psychiatric institution, whether commonwealth, municipal, or private; s) if a person who was suffering from a contagious disease that might constitute a menace to the public health. P.R. Laws Ann. Tit. 18, § 699. See P.R. Laws Ann. Art. 18, § 699a for other circumstances.

PROCEDURE: The Director shall investigate, in their medico-legal aspects, subject deaths. P.R. Laws Ann. Tit. 18, § 698. Subject deaths should be reported to the police, or to any judge or prosecuting attorney, who shall notify the forensic physician, P.R. Laws Ann. Art. 18, § 701, especially in cases where the death is evidently of a criminal nature. P.R. Laws Ann. Tit. 18, § 700. If forensic physician deems autopsy necessary, he may perform one. P.R. Laws Ann. Tit. 18, § 702. Forensic physician may take depositions, make rules and regulations, and delegate duties to assistant physicians. P.R. Laws Ann. Tit. 18, § 703. (See P.R. Laws Ann. Tit. 18, § 707 for development of forensic physician system.) Forensic physician to send investigation and autopsy reports to the investigating judge or prosecuting attorney. P.R. Laws Ann. Tit. 18, § 705. Outside physicians and pathologists may be employed. P.R. Laws Ann. Tit. 18, § 708. Facilities provided by the University of Puerto Rico Medical School. P.R. Laws Ann. Tit. 18, § 712a. P.R. Laws Ann. Tit. 18, § 712b provides for payment for services of outside physicians or pathologists.

ACCESSIBILITY: Death certificate - P.R. Laws Ann. Tit. 24, § 1104: required to be filled out by the undertaker or other in possession of the body and the physician with the General Registry of Vital Statistics. No specific statutory provision relative to accessibility of death certificates by next of kin, nor any "right to know" law.
Reports - P.R. Laws Ann. Tit. 18, § 711: Institute of Forensic Medicine shall keep detailed files, properly protected and guarded against inspection by unauthorized persons.

INFANT DEATH: No statutory indication.

VIRGIN ISLANDS

TITLE: Medical examiner. V.I. Code Ann. Tit. 3, § 115(a).

TERM: No statutory indication.

APPOINTMENT: There shall be in the Department of Law, such medical examiners as the Governor deems necessary for the requirements of the Virgin Islands. V.I. Code Ann. Tit. 3, § 115(a).

QUALIFICATIONS: Duly licensed to practice medicine in the Virgin Islands. V.I. Code Ann. Tit. 3, § 115(a).

SUBJECT DEATHS: (i) a violent death, whether by criminal violence, or casualty; (ii) a death caused by unlawful act or criminal neglect; (iii) a death occurring in a suspicious, unusual or unexplained manner; (iv) a death caused by suspected criminal abortion; (v) a death while unattended by a physician, so far as can be discovered or where no physician able to certify the cause of death as provided by law can be found; (vi) a death of a person confined to a public institution other than a hospital, infirmary or nursing home. V.I. Code Ann. Tit. 3, § 115(a)(2).

PROCEDURE: Medical examiner has general duty to investigate unnatural deaths and subject deaths. V.I. Code Ann. Tit. 3, §§ 115(a)(1) and 115(a)(2). Commissioner of Health or of Public Safety must report subject deaths to the medical examiner. Medical examiner shall go at once and take charge of the body. Medical examiner must investigate, and reduce his findings to writing. During the investigation, the medical examiner shall make or cause to be made such examinations, including an autopsy, as in his opinion is necessary to establish the cause of death, or to determine the means or manner of death, or to discover the facts, which is requested in writing by the Attorney General, United States Attorney, or the Commissioner of Public Safety. Medical examiner may request assistance from other departments, physicians, etc. in the form of tests, examinations, reports, etc. as are in his opinion necessary. V.I. Code Ann. Tit. 3, § 115.

ACCESSIBILITY: Death certificate - V.I. Code Ann. Tit. 19, §§ 862, 863: filing of death certificates is unclear. The registrar shall, upon request, supply to any applicant, who has a legitimate interest, a certified copy of a record of death. V.I. Code Ann. Tit. 19, § 806.
Reports - V.I. Code Ann. Tit. 3, § 881: this creates the right to examine all public records, except where otherwise provided. It is unclear whether medical reports, etc. fall within the provisions of V.I. Code Ann. Tit. 3, § 881g.

INFANT DEATH: No statutory indication.

NOTE: See V.I. Code Ann. §§ 863, 864, and 865 for death investigation by the Commissioner. These sections may or may not be superfluous, in light of the medical examiner provisions in V.I. Code Ann. Tit. 3, § 115.

FOOTNOTES

[1] In Fulton County, the office of the medical examiner assumes jurisdiction of these cases under the provision that these deaths occur "suddenly when in apparent health."

[2] In Fulton County, copies of the medical examiner's reports are not filed with the clerk of the Superior Court. By department policy, the Fulton County office of the medical examiner releases autopsy reports only to the deceased's immediate next-of-kin and their authorized representatives.

[3] In actual practice, inquests are conducted only when there is no available evidence concerning a death.

[4] The coroners are free to utilize any services needed in conducting a death investigation.

[5] An extensive continuing education program has been funded for the coroners and has been utilized in obtaining homicide investigation schooling for coroners.

[6] Through the Bureau of Vital Statistics and an opinion of the Attorney General, coroners are not to have jurisdiction over all specified deaths other than natural even if such death occurs in a medical facility.

[7] As a matter of administrative practice, upon request by a family member a coroner will provide copies of autopsy reports to next of kin.

[8] A discretionary and voluntary SIDS program has been implemented statewide.

[9] Despite the statutory requirement of State payments for autopsies for sudden infant death syndrome, the State has made no appropriation, and accordingly the costs of such autopsies have been borne by the counties.

[10] In Hennepin County, all records relative to the investigation of deaths are not available to any person. The policy of the office of the County Medical Examiner in Hennepin County is that autopsy report information is available to all through relatives of the deceased only (other than law enforcement agencies and county attorney).

[11] Within Hennepin County since 1964, an elaborate sudden infant death program has been in operation due to the efforts of Dr. John I. Coe, Medical Examiner of Hennepin County, and the local SIDS chapter.

[12] A bill, SB 2101, has passed the legislature in the 1977 session and provides for the autopsying of infant deaths, at State expense, upon request of the parents, and for an educational and informational program regarding the sudden infant death syndrome.

[13] The State Medical Examiner also may order a body exhumed in any death requiring investigation and may, after a reasonable and thorough investigation, complete and file a death certificate for any person whose body is not found.

[14] The city and county of Philadelphia has a home rule charter and has a medical examiner appointed under civil service. A few other counties have also opted for a home rule charter and some of them will no longer be electing a coroner. (Home rule charters are optional under a recent change in the State Constitution.)

[15] S.C. Code Ann. § 17-162 reads as follows: "There is hereby created in all counties of the State having a population of two hundred forty thousand or more . . . a commission to be known as the medical examiner commission of that county . . . The creation of a medical examiner commission provided for herein shall not be effective until the county governing body shall enact an appropriate implementing resolution therefor."

[16] Since 1953, when the medical examiner system in Vermont was established, all commissioners and State boards of health have followed the precedent of requiring that each candidate for chief medical examiner be a doctor of medicine, a pathologist, and, finally, certified as a forensic pathologist with the American Board of Pathology.

[17] The term "designated", in usage, has become synonymous with "full-time".

[18] Next of kin are permitted to have access to reports by the chief medical examiner when release is provided by the pertinent State's attorney.

[19] Under present law, the office of the chief medical examiner states that Vermont has achieved nearly 100% autopsy coverage of those deaths suspected to have been caused by sudden infant death syndrome.

[20] In practice, the Chief Medical Examiner never designates a toxicologist to perform an autopsy.

[21] Since 1967, no funds have been appropriated to carry out sudden infant death syndrome autopsy examinations. The University of Washington has therefore reserved the right to refuse to perform an infant death autopsy from outside King County because of limited funds.

APPENDIX:

SUPPLEMENTAL DATA

The tables below set forth the categorization of medico-legal systems mentioned in the Introduction to this report. The appended material represents major identified family categories, membership of jurisdictions within each family, and various supportive data organized by reference both to jurisdiction and to individual operational traits.

Categorization included the disassembly of each death investigation system into the following constituent operational traits:

(1) Structure--The administrative base of the system as it relates to the political division assuming responsibility for the investigation of death within the jurisdiction.

(2) Accession--The method by which responsible personnel are recruited on behalf of the system.

(3) Qualifications--The degree of medical education and experience required by personnel within the system.

(4) Authority--The possession of authority to order autopsies.

The process of grouping jurisdictions entailed functional interpretation of the constituent characteristics of each respective medico-legal system. In the great majority of cases, a jurisdiction's system fell with ease into a grouping, or "family", sharing a common matrix of functional characteristics. As to the small number of jurisdictions which did not singularly identify with an established category, each such system was placed into the major "family" with which it had most in common and qualified as to the remaining differences.

TABLE 1. Family Categories Identified by Functional Characteristic Only.

I. Statewide

- a. structure: statewide, unified and centralized
- b. method of accession: appointed
- c. qualifications: doctor of medicine or none
- d. authority to order: independent or shared

II. Tiered

- a. structure: county/state tiered
- b. method of accession: appointed or optional
- c. qualifications: doctor of medicine
- d. authority to order: independent or shared

III. County based: appointed

- a. structure: county based, independent, centralized
- b. method of accession: appointed
- c. qualifications: doctor of medicine or none
- d. authority to order: independent or shared

IV. County based: optional*

- a. structure: county based, independent, centralized
- b. method of accession: elected or appointed
- c. qualifications: doctor of medicine or none
- d. authority to order: independent or shared

V. County based: elected

- a. structure: county based, independent, centralized
- b. method of accession: elected
- c. qualifications: doctor of medicine or none
- d. authority to order: independent or shared

*"Optional" refers to the jurisdiction's statutory creation of local option in establishing a death investigation system; usually either a coroner or medical examiner or a combination of elements of both.

TABLE 2. Families Of Medico-Legal Systems by Functional Characteristic and Jurisdiction.

I. Statewide

- a. statewide medical examiner
- b. appointed
- c. doctor of medicine plus experience
- d. independent

GUAM
MARYLAND
NEW MEXICO
RHODE ISLAND

- a. statewide medical examiner
- b. appointed
- c. doctor of medicine
- d. shared

DELAWARE
IOWA
MAINE
NEW JERSEY
OKLAHOMA
UTAH
VIRGINIA
WEST VIRGINIA

TABLE 2. (cont'd)

a. statewide medical examiner
b. appointed
c. doctor of medicine
d. independent

PUERTO RICO

a. statewide medical examiner
b. appointed
c. doctor of medicine
d. shared

DISTRICT OF COLUMBIA
OREGON
VERMONT
VIRGIN ISLANDS

a. statewide medical examiner
b. appointed
c. no medical degree
d. shared

AMERICAN SAMOA

II. Tiered

a. coroner and medical examiner
b. appointed
c. doctor of medicine
d. independent

CONNECTICUT

a. coroner and medical examiner
b. appointed
c. doctor of medicine plus experience
d. shared

TENNESSEE

a. coroner and medical examiner
b. appointed
c. doctor of medicine
d. independent

ALASKA

a. coroner and medical examiner
b. appointed
c. doctor of medicine
d. shared

SOUTH CAROLINA

a. coroner and medical examiner
b. elected - appointed
c. doctor of medicine plus experience
d. shared

ARKANSAS
MISSISSIPPI

a. coroner and medical examiner
b. elected - appointed
c. doctor of medicine
d. independent

FLORIDA
GEORGIA
KENTUCKY

a. coroner and medical examiner
b. elected - appointed
c. doctor of medicine
d. shared

NORTH CAROLINA

III. County based: appointed

a. county medical examiner
b. appointed
c. doctor of medicine plus experience
d. independent

ARIZONA

a. coroner or medical examiner
b. appointed
c. doctor of medicine plus experience
d. shared

KANSAS

a. coroner or medical examiner
b. appointed
c. doctor of medicine
d. independent

MICHIGAN

a. coroner or medical examiner
b. appointed
c. doctor of medicine
d. shared

NEW HAMPSHIRE
NORTH DAKOTA

TABLE 2. (cont'd)

a. coroner or medical examiner
b. appointed
c. no medical degree
d. independent

CANAL ZONE
NEVADA

a. coroner or medical examiner
b. appointed
c. no medical degree
d. shared

MASSACHUSETTS

IV. County based: optional

a. coroner or medical examiner
b. elected - appointed
c. doctor of medicine plus experience
d. independent

CALIFORNIA

a. coroner or medical examiner
b. elected - appointed
c. doctor of medicine plus experience
d. shared

TEXAS

a. coroner or medical examiner
b. elected - appointed
c. doctor of medicine
d. independent

MINNESOTA
NEW YORK
OHIO

a. coroner or medical examiner
b. elected - appointed
c. doctor of medicine
d. shared

HAWAII
MISSOURI

a. coroner or medical examiner
b. elected - appointed
c. no medical degree
d. independent

WASHINGTON
WISCONSIN

a. coroner or medical examiner
b. elected - appointed
c. no medical degree
d. shared

PENNSYLVANIA

V. County based: elected

a. coroner or medical examiner
b. elected
c. doctor of medicine
d. independent

LOUISIANA

a. coroner or medical examiner
b. elected
c. no medical degree
d. independent

ALABAMA
IDAHO
ILLINOIS
INDIANA
MONTANA
NEBRASKA

a. coroner or medical examiner
b. elected
c. no medical degree
d. shared

COLORADO
SOUTH DAKOTA
WYOMING

TABLE 3. Numerical Summary of Categories.

I. **Statewide**

18 jurisdictions

- a. 17 require medical degree
  - 1 requires no medical degree
- b. 5 possess authority to order autopsies independently
  - 13 possess such authority in conjunction with another or other State agencies
- c. 18 are appointed to office

II. **Tiered**

10 jurisdictions

- a. 10 require medical degree for that part of the system which is responsible for forensic investigation
- b. 5 possess authority to order autopsies independently
  - 5 share such authority
- c. 4 are appointed
  - 6 are either elected by an appointed body or appointed by an elected body

III, IV, V. **County based**

28 jurisdictions

- a. 13 require medical degree
  - 15 require no medical degree
- b. 17 possess authority to order autopsies independently
  - 11 share such authority
- c. 8 are appointed
  - 10 are either elected or appointed
  - 10 are elected

TABLE 4A. Jurisdictions Presently Maintaining Statutory Provisions Referencing Infant Death.

California

Louisiana

Maine

Massachusetts

Michigan

Nevada

New Hampshire

North Dakota

Utah

Washington

TABLE 4B. Jurisdictions Having Received Legislative Bills, Not Becoming Law, Which Referenced Infant Death.

Colorado

Iowa

Maryland

Missouri

New Jersey

New York

TABLE 5. State and Territorial Abbreviations.

Alabama	AL	Missouri	MO
Alaska	AK	Montana	MT
American Samoa	A.S.	Nebraska	NB
Arizona	AZ	Nevada	NV
Arkansas	AR	New Hampshire	NH
California	CA	New Jersey	NJ
Canal Zone	C.Z.	New Mexico	NM
Colorado	CO	New York	NY
Connecticut	CT	North Carolina	NC
Delaware	DE	North Dakota	ND
District of Columbia	D.C.	Ohio	OH
Florida	FL	Oklahoma	OK
Georgia	GA	Oregon	OR
Guam	Guam	Pennsylvania	PA
Hawaii	HI	Puerto Rico	P.R.
Idaho	ID	Rhode Island	RI
Illinois	IL	South Carolina	SC
Indiana	IN	South Dakota	SD
Iowa	IA	Tennessee	TN
Kansas	KS	Texas	TX
Kentucky	KY	Utah	UT
Louisiana	LA	Vermont	VT
Maine	ME	Virginia	VA
Maryland	MD	Virgin Islands	V.I.
Massachusetts	MA	Washington	WA
Michigan	MI	West Virginia	WV
Minnesota	MN	Wisconsin	WI
Mississippi	MS	Wyoming	WY

TABLE 6A. Distribution by Structure.

SME	C AND ME	C OR ME	
A.S.	AK	AL	MO
DE	AR	AZ	MT
D.C.	CT	CA	NB
Guam	FL	C.Z.	NV
IA	GA	CO	NH
ME	KY	HI	NY
MD	MS	ID	ND
NJ	NC	IL	OH
NM	SC	IN	PA
OK	TN	KS	SD
OR		LA	TX
P.R.		MA	WA
RI		MI	WI
UT		MN	WY
VT			
VA			
V.I.			
WV			

TABLE 6B. Nature of Structure Per Jurisdiction.

AL	county coroner
AK	coroner medical examiner
A.S.	AG - Department of Medical Services (Territorial)
AZ	county medical examiner
AR	county coroner State medical examiner
CA	coroner or county medical examiner
C.Z.	coroner
CO	county coroner
CT	county coroner medical examiner
DE	State medical examiner
D.C.	State medical examiner
FL	coroner medical examiner
GA	county coroner medical examiner
Guam	Territorial medical examiner
HI	coroner - coroner's physician
ID	county coroner
IL	county coroner
IN	county coroner
IA	State medical examiner county medical examiner
KS	district coroner
KY	county coroner or county medical examiner
LA	parish coroner
ME	State medical examiner
MD	State medical examiner
MA	medical examiner (district)
MI	county medical examiner
MN	county coroner or county medical examiner plus Hennepin County medical examiner
MS	county coroner county coroners who are M.D.'s State medical examiner
MO	county coroner or county medical examiner plus St. Louis City coroner
MT	county coroner
NB	county coroner
NV	district coroners
NH	medical referee
NJ	State medical examiner
NM	State medical investigators district medical investigators
NY	coroners or coroners and coroner's physicians or medical examiner
NC	county coroner county medical examiner

TABLE 6 B. (Cont'd)

MD	county coroner medical county coroners
OH	county coroners
OK	State medical examiner
OR	State medical examiner district medical examiner
PA	county coroner
P.R.	forensic physician (Territorial)
RI	State medical examiner
SC	county coroner or county medical examiner
SD	county coroner
TN	State medical examiner county medical examiner county coroner
TX	county medical examiner or Justice of the Peace (ex officio coroner)
UT	State medical examiner
VT	State medical examiner
VA	State medical examiner
V.I.	Territorial medical examiner
WA	county coroner
WV	State medical examiner
WI	coroner or medical examiner
WY	county coroners

TABLE 7. Distribution by Qualifications.

No MD			MD			MD+		
AL	IL	NV	AK	MI	OH	AZ	KS	RI
A.S.	IN	PA	D.C.	MN	OR	AR	ME	TN
C.Z.	MA	SD	FL	MO	P.R.	CA	MD	TX
CO	MT	WA	GA	NH	SC	CT	MS	UT
ID	NB	WY	HI	NY	VT	DE	NJ	VA
			KY	NC	V.I.	Guam	NM	WV
			LA	ND	WI	IA	OK	

TABLE 8. Distribution by Method of Accession.

Elected	Elected or Appointed		Appointed		
AL	AR	MO	AK	ME	OR
CO	CA	NY	A.S.	MD	P.R.
ID	FL	NC	AZ	MA	RI
IL	GA	OH	C.Z.	MI	SC
IN	HI	PA	CT	NV	TN
LA	KY	TX	DE	NH	UT
MT	MN	WA	D.C.	NJ	VT
NB	MS	WI	Guam	NM	VA
SD			IA	ND	V.I.
WY			KS	OK	WV

TABLE 9. Distribution by Authority to Order.

Independent		Shared	
AL	MD	A.S.	NC
AK	MI	AR	ND
AZ	MN	CO	OK
CA	MT	DE	PA
C.Z.	NB	D.C.	SC
CT	NV	HI	SD
FL	NM	IA	TN
GA	NY	KS	TX
Guam	OH	ME	UT
ID	OR	MA	VT
IL	P.R.	MS	VA
IN	RI	MO	V.I.
KY	WA	NH	WV
LA	WI	NJ	WY

TABLE 10. Summary of Categories.

Areas	Accession			Qualifications			Authority to Order Autopsy		Structure		
	Appt'd	Elect Appt	Elect	MD+	MD	No MD	Shared	Ind	SME	C and ME	C or ME
AL			X			X		X			X
AK	X				X			X		X	
A.S.	X					X	X		X		
AZ	X			X				X			X
AR		X		X			X			X	
CA		X		X				X			X
C.Z.	X					X		X			X
CO			X			X	X				X
CT	X			X				X		X	
DE	X			X			X		X		
D.C.	X				X		X		X		
FL		X			X			X		X	
GA		X			X			X		X	
Guam	X			X				X	X		
HI		X			X		X				X
ID			X			X		X			X
IL			X			X		X			X
IN			X			X		X			X
IA	X			X			X		X		
KS	X			X			X				X
KY		X			X			X		X	
LA			X		X			X			X
ME	X			X			X		X		
MD	X			X				X	X		
MA	X					X	X				X
MI	X				X			X			X
MN		X			X			X			X
MS		X		X			X			X	
MO		X			X		X				X
MT			X			X		X			X
NB			X			X		X			X
NV	X					X		X			X
NH	X				X		X				X
NJ	X			X			X		X		
NM	X			X				X	X		
NY		X			X			X			X
NC		X			X		X			X	
ND	X				X		X				X
OH		X			X			X			X
OK	X			X			X		X		
OR	X				X			X	X		
PA		X				X	X				X
P.R.	X				X			X	X		
RI	X			X				X	X		
SC	X				X		X			X	
SD			X			X	X				X
TN	X			X			X			X	
TX		X		X			X				X
UT	X			X			X		X		
VT	X				X		X		X		
VA	X			X			X		X		
V.I.	X				X		X		X		
WA		X				X		X			X
WV	X			X			X		X		
WI		X			X			X			X
WY			X			X	X				X
TOTALS	30	16	10	20	21	15	28	28	18	10	28

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SUDDEN UNEXPLAINED INFANT DEATH, 1970 THROUGH 1975
An Evolution in Understanding

MARIE VALDES-DAPENA

Is The Victim Normal?

The last six years have witnessed a remarkable change in our understanding of sudden unexpected and unexplained infant death; the change pertains to several aspects of our comprehension. Almost a decade ago, it was generally agreed that the usual victim of such a tragedy was a well-nourished and well-developed baby, usually 2 to 4 months of age whose sudden and unexpected death remained inexplicable after the performance of an adequate autopsy. It was granted by most that many of the affected infants had either a history of recent minor illness, especially an upper respiratory infection or histologic evidence of the same. But, no satisfactory cause of death could be ascertained at postmortem examination, and it was assumed that the babies had been basically well prior to their sudden demise.

Research conducted in recent years, however, has demonstrated that—*as a group*—these infants are different from normal anatomically, histologically, chemically, and even physiologically. Peterson et al.[75] in a study of 362 autopsied victims, showed that their crown-to-heel length, head circumference, and weight gain, by history, were significantly less than those of 270 living infants reared under optimal growth conditions. Naeye and Drage[66] encountered almost the same sort of revelation in a "prospective" study, a comparison of 124 victims with 372 matched controls. The mean body weight of the subjects had *fallen* from the fortieth to the twentieth percentile between birth and 4 months of age. Their body length and head circumference likewise exhibited similar retardation. Their postneonatal growth delay was shown to involve bones, brain, and other organs, all to about the same degree.

In 1976, evidence of another singular anatomic difference between normal infants and those who die suddenly, unexpectedly, and inexplicably was demonstrated at autopsy by Naeye et al.[69] In a study of 118 infants, they showed that many who die of the sudden infant death syndrome have abnormally heavy cardiac right ventricles.

All of the now known histologic differences between affected and normal infants have been brought to light by Naeye. In 1973, spurred by a desire to find supportive evidence that affected infants had indeed been subjected to chronic hypoxemia, he began to explore the possibility that they might exhibit abnormalities of the walls of their small pulmonary arteries. What he discovered was an increase in mean pulmonary arterial medial muscle mass produced by the combined effects of hyperplasia and hypertrophy.[64] This observation was later supported by Mason et al [59] and is being investigated further in our own laboratory.

The following year, in the course of the same quest, Naeye showed that again, *as a group*, infants who die of "crib death" exhibit significantly more retention of periadrenal brown fat during the first year of life than normal controls.[65] This observation, too, has since been confirmed by others.[113]

Along those same lines, Naeye also showed that affected infants exhibit undue retention of hepatic extramedullary hematopoiesis,[65] a finding later confirmed in our laboratory.[112]

Still in the realm of histologic differences, Naeye recently discovered that the victims also exhibit an increased volume of adrenal chromaffin cells; [68] this, too, he considers to be a consequence of chronic hypoxemia.

In a separate study of the brain stem, Naeye found that half of the victims had more astroglial fibers in those portions of the brain stem which regulate respiration than did matched controls.[66] Regarding this observation, however, he believes that the alteration is more likely secondary to chronic hypoxemia than its cause.

Naeye and Drage [67] have correlated all of these major anatomic and histologic observations as follows: The increase in weight of the cardiac right ventricle proves to be directly proportional to (a) the increase in muscle mass in the walls of small pulmonary arteries, (b) the degree of retention of periadrenal brown fat, and (c) the presence of hepatic erythropoiesis. He concludes that the pulmonary arterial abnormality is "probably the result of chronic alveolar hypoventilation while brown fat retention and hepatic erythropoiesis are likely consequences of chronic hypoxemia."

Dr. Henry Lardy and his co-workers at the University of Wisconsin have identified yet another aspect of the differences between infants who die of crib death and those of like age who appear to be normal.[56] They used hepatic tissue obtained at autopsy from 122 infants to determine the activity of certain gluconeogenic enzymes. Hepatic phosphoenolpyruvate carboxykinase activity proved to be considerably lower in the victims than in normal infants and, in many, the enzyme was defective "in its response to divalent transition metals such as Mn^{2+}," which they consider to be of special significance. They feel that this diminished enzyme activity could conceivably be responsible for fatal hypoglycemia but that, as is more likely, it may be nothing more than another secondary expression of adverse tissue reaction to some generalized phenomenon such as hypoxemia.

A number of investigators have recently explored the possibility that affected infants are or have been different from controls in regard to certain physiologic functions. Perhaps the most comprehensive of these studies was a review of the data collected from the Collaborative Perinatal Project of the National Institute of

Neurological and Communicative Disorders and Stroke. The initial intent had been to observe and document every aspect of the course of each of 59,379 conceptions and the ensuing pregnancies, including gestation, labor, and delivery, the neonatal period of each infant, and the development of every child up to 8 years of age. Of all these conceptions, 125 terminated as instances of sudden death in infancy. These 125 infants were compared with living matched controls from the same group by Naeye and Drage.[66] The victims of sudden death were noted, in retrospect, to have had more low Apgar scores than controls, all components of the scoring system except skin color contributing to that abnormality. About twice as many of the study subjects as controls had required neonatal resuscitation, positive respiratory pressure, and the administration of oxygen. Future victims had experienced a greater rate of the respiratory distress syndrome and more had received antibiotics. Feeding problems were common among them, their bottle feeding had been delayed and feeding by gavage was more often required.

A variety of neurologic abnormalities were observed more frequently among future victims of crib death than in the matched controls; they included jitteriness or tremulousness, an abnormal Moro reflex, generalized muscular hypotonia, abnormal reflexes, and spontaneous hypo- or hyperthermia. The data for all of these differences prove to be statistically significant.

Naeye and his co-workers [69] approached the issue of functional or physiologic differences between affected infants and controls, during life, in still another manner. They conducted a separate retrospective study of the behavioral patterns of 46 infants who had died of crib death and compared them with those of their own siblings using an open-ended interview with the parents. The parents, whose infants had died within the preceding 3 years, were asked to describe the behavior, growth, and development of the affected babies and to make their own comparisons with those of siblings at comparable ages. Following the free interview, each set of parents completed a 70-item, self-administered Carey questionnaire.

By comparison, those infants who had later died of crib death, appeared to have been less active during life than their sibling controls. They exhibited less intense responses to a variety of stimuli. They were more often breathless and easily exhausted during feeding and had cries of different pitch. All of these differences were statistically significant and correlated well with postmortem morphologic evidences of hypoxemia.

Data on postnatal growth were obtained from baby books and physicians' records. Two-thirds of the victims had experienced a decrease in body weight percentile after birth in comparison to only one-third of the controls (P less than 0.05 Chi square). The mean decrease for victims was 7.6 ± 4.4 percentile points, whereas the sibling controls exhibited a mean *increase* of 2.8 ± 5.3 points.

In at least three separate instances, detailed physiologic studies were carried out on individual infants who later died inexplicably. In the first of these,[50] the intranatal fetal heart rate patterns of an infant who subsequently died suddenly and inexplicably showed variable decelerations indicative of umbilical cord compression. These patterns were unusual, closely resembling those of more immature fetuses in whom the mechanisms for the control of heart rate are not fully developed or have been blunted by the administration of atropine. Recordings of this same infant's heart rate immediately after birth showed more persistent tachycardia and less beat-to-beat variability than is usually found in clinically normal infants at equivalent gestational age.

In another such instance, the crying of an apparently healthy infant, who later died of crib death, was recorded on the fourth day of life in the department of Otolaryngology at the Johns Hopkins University School of Medicine.[56] The crying was perceived as unusual at the time; it was later analyzed and compared with that of four normal controls. The sounds produced by the subject were weaker and of shorter duration. Extremely high-pitched cries were more often exhibited by the victim. The cries were frequently weak and breathy. Abrupt changes in pitch and the presence of more than one pitch in the same segment of crying were also noted. These features suggested to the investigators abnormal function of the larynx and the vocal tract above the larynx.

Dr. Lee Salk and his team at Cornell [81] encountered yet another infant who subsequently succumbed to crib death in the course of a study of normal neonatal learning ability using cardiac habituation to an auditory stimulus. In retrospective review of the records, they discovered that the infant in question had showed greater lability and poorer stabilization of cardiac rate than 24 healthy neonatal controls. This observation suggested to Dr. Salk dysfunction of the central mechanism for stabilizing the autonomic response.

In view of all of these morphologic, chemical, and functional differences between groups of infants and individual infants who die suddenly, unexpectedly, and inexplicably and normal controls, it would now seem apparent that babies who die of crib death are not normal at the time of death and probably are never entirely normal. To put it another way, *as a group*, infants who ultimately die of crib death exhibit structural and functional abnormalities during life and at postmortem examination, which serve to indicate that in some way, not as yet defined, they are physiologically defective. This is, of course, a revelation inasmuch as just a few years ago virtually everyone assumed that they were in no way abnormal.

In this regard, however, a word of caution is in order. Despite the fact that anatomic, histologic, and physiologic differences between groups of infants have been described in detail, there is not as yet a single one of these differences that can be employed, before or after the death, as a predictive or diagnostic criterion. The fact of the matter is that there is not yet one positive criterion that can be employed by the clinician to identify the future victim, nor is there as yet one positive criterion that the pathologist can use to identify the subject at autopsy.

This is of the utmost importance to recognize, because some general pathologists, having heard that babies who die of crib death, for example, exhibit relatively more periadrenal brown fat than normal controls, have assumed that this feature represents a means of establishing the diagnosis at the time of postmortem examination—it does not. Nor do any of the other features mentioned; they are only characteristics of the group as a whole.

Observations at Autopsy

Morphologic observations at autopsy in the "typical" instance of sudden, unexpected, unexplained infant death have been described repeatedly in the literature both in the past,[2] and more recently.[7, 109, 110]

Characteristic observations include the following:

1. The body usually appears to be well developed and well nourished.
2. Frothy and even blood-tinged mucus may be present in and about the external nares.
3. Petechiae are often prominent over the pleural surfaces, especially the visceral surfaces, under the capsule and within the substance of the thymus, and in the epicardium.
4. The thymus is usually quite large, within limits of normal.
5. Blood in the heart is usually liquid rather than clotted.
6. The lungs fill their respective pleural cavities completely and often exhibit moderate edema and congestion.
7. The larynx or trachea often contain a little frothy, thin mucoid fluid and, at times, aspirated gastric content usually in the form of milk curd.
8. Lymphoid structures throughout the body, such as the mesenteric lymph nodes, are almost too well preserved.
9. The adrenals tend to be small, within limits of normal.
10. The urinary bladder is usually empty.
11. The stomach often contains abundant curd.

Other organs and tissues as examined grossly are usually not remarkable. Characteristic microscopic observations include:

1. Histologic features corresponding to numbers 3, 4, 6, 7, 8, and 9.
2. In the lungs, interalveolar walls are normally thick and cellular.
3. There may be foci of fibrinoid necrosis in the larynx or diffuse "subacute" inflammation involving the mucosa.
4. In the tracheal mucosa, the same sort of infiltrates including plasma cells may be seen.

Bacterial cultures of heart's blood with concomitant cultures of the spleen for confirmation reveal the presence of isolated significant pathogenic organisms in not more than 5 percent of these autopsies. Cultures of the lungs and upper airway characteristically yield a variety of organisms. Interpretation of their significance, especially in the absence of morphologic evidence of disease, is difficult if not impossible.

The Causes of Sudden, Unexpected, *Explained* Infant Deaths

Every once in a while, the postmortem examination of an apparently healthy infant of appropriate age reveals a recognizable, incontrovertable cause of death. There are the rare discoveries of extensive involvement of the heart and brain in the pathologic lesions characteristic of tuberous sclerosis, for example. But these occurrences are so infrequent as to be unworthy of inclusion in a working list of disease entities that might be expected to become evident under such circumstances.

At a recent conference for forensic pathologists in Santa Fe,[70] a group of those assembled compiled the following catalogue of disease processes they felt might reasonably be expected to become evident during the course of an autopsy on the body of an infant who had died suddenly and unexpectedly.

1. General:
    Sepsis (including meningococcemia)
2. Heart:
    Endocardial sclerosis (subendocardial fibroelastosis):
    Congenital aortic stenosis
    Myocarditis (especially Coxsackie)
3. Lungs:
    Pneumonia
    Bronchiolitis
4. Kidneys:
    Evidence of poisoning (eg, salt poisoning)
5. Gastrointestinal tract:
    Enterocolitis (eg, Shigella, Salmonella)
    Evidence of cystic fibrosis of the pancreas (particularly in hot weather)
6. Liver:
    Hepatitis (especially Coxsackie)
    Evidence of poisoning
7. Pancreas:
    Pancreatitis (especially Coxsackie)
    Evidence of poisoning (especially boric acid)
    Cystic fibrosis (particularly in hot weather)
8. Adrenal:
    Congenital adrenal hyperplasia
9. Brain:
    Meningitis
    Encephalitis
    Evidence of trauma (especially subdural hemorrhage)
    Arteriovenous malformation
10. Skeleton:
    Skull fracture
    Other evidences of "child battering"

This list was compiled by the group of working forensic pathologists assembled there, not by any means as an exhaustive treatise on the subject, but rather as a practical guide or reminder as to what sorts of identifiable disease processes may eventuate in the sudden and unexpected death of an apparently well infant.

Minimal Pathologic Changes and the Dilemma They Pose for the Pathologist

Virtually all pathologists who have performed substantial numbers of infant autopsies, have encountered the insoluble problem of what to do about the case in which there are identifiable lesions of minimal to moderate intensity which, of themselves, would not appear adequate to have caused death. One of the most common of these is inflammation of the larynx or trachea, observed in at least 50 percent of the sudden deaths of seemingly well infants. Another is the presence of neutrophiles, in relatively small numbers, scattered about pulmonary alveoli. Still another is bronchiolitis, observed in just a few of the sections of lung examined in any one case. Not uncommonly, careful microscopic study of the heart will reveal an occasional cluster of inflammatory cells within the myocardium.

As mentioned elsewhere in this chapter a few such autopsies will reveal the histologic changes characteristic of cytomegaloviral infection. However, in those instances in which attempts at viral isolation have been conducted in conjunction with the microscopic study of tissues, the sites of recovery of the viruses unfortunately have not corresponded to those in which morphologic lesions have been demonstrated and vice versa.

In the situations described here, most pathologists with an appreciable body of experience in the area have elected arbitrarily to group such cases into a subset of the so-called sudden infant death syndrome with minimal to moderate pathologic alterations probably insufficient, of themselves, to have been responsible for death.

Recent Developments Regarding Epidemiologic and Clinical Factors

Incidence

A review of recently published reports on the epidemiology of sudden, unexpected, unexplained infant deaths reveals considerable variation from place to place. The rate of occurrence varies from 0.06 per 1000 livebirths in Sweden [35] to 3.00 per 1000 livebirths in Ontario, Canada [93] (Table 1).

One of the most interesting aspects of this particular issue concerns the apparent decrease which has been observed lately, not only in the numbers of

TABLE 1. Recent Data on Comparative Rates of Occurrence of the Sudden Infant Death Syndrome

Author	*Year*	*Location*	*Rate/1000 Livebirths*
Fohlin [35]	1974	Stockholm, Sweden	0.06
Block [15]	1973	Ashkelon Dist., Israel	0.31
Baak [4]	1974	Netherlands	0.42
Houstek [51]	1970	Czechoslovakia	0.8
Kraus [54]	1972	California	1.55
Borhani [18]	1973	Sacramento Co., California	1.7
Beal [5]	1972	South Australia	1.7
Tonkin [100]	1974	Auckland, New Zealand	1.9
Valdes-Dapena [114]	1974	Philadelphia	1.92 (in 1972)
Camps [22, 23]	1970	Great Britain	2.0
Adelson [1]	1975	Cuyahoga Co., Ohio	2.08 (in 1974)
Bergman [14a]	1972	King Co., Washington	2.32
Turner [102]	1975	Western Australia	2.5
Fedrick [33]	1973	Oxford Linkage Area, Great Britain	2.78
Froggatt [40a]	1971	Northern Ireland	2.8
Steele [93]	1970	Ontario, Canada	3.0

TABLE 2. Documented Diminution in Rate of Occurrence of the Sudden Infant Death Syndrome

Author	*Years*	*Location*	*Rates/1000 Livebirths*
Houstek [51]	1952–67	Czechoslovakia	3.0 –0.8
Valdes-Dapena [114]	1960–74	Philadelphia	2.5 –1.9
Borhani [15]	1964–70	California	2.0 –0.9
Adelson [1]	1965–70	Cuyahoga Co., Ohio	3.45–2.07
Mason [60]	1965–74	Memphis	3.10–0.9

infants dying of crib death but also in the relative rate of occurrence per 1000 livebirths. Comparison of the figures in Table 1, for example, with those that appear in a similar chart prepared in 1969 [108] reveals the fact that, in general, relative rates are lower now than they were as little as seven years ago. However, the fact that the rate had really diminished to a statistically significant degree in specific populations under continued and relatively sophisticated surveillance for the occurrence of the phenomenon did not become apparent until 1974.[109] Retrospective review of the available reliable data shows that in at least five circumscribed populations there has been a similar substantial documented decrease (Table 2).

We have observed, however, as have others,[51] that this decrease parallels that for all infant deaths during the same period of time. One can only speculate as to the significance of both trends. At least in Philadelphia, the drop is not paralleled by any reduction in the rate of prematurity, but it does prove to be quite similar to a steady decrease in inadequate delivery of prenatal care.

Socioeconomic Factors

For many years, investigators have been aware that, in general terms, the socially and economically underprivileged are more susceptible to crib death than the well-to-do. In the last eight years, however, a number of interested workers have concentrated on attempts to analyze pertinent data in some systematic fashion.

Bergman et al [14a] examined the incidence of crib death from the standpoint of family income, and determined that in King County, Washington, 38 percent of affected families earned less than $5000 a year and 89 percent, less than $10,000. Borhani et al [18] also approached the problem along those lines determining rates in each of 5 groups of census tracts according to average income. Where the median family income exceeded $13,500, the rate of crib death was 1.3 per 1000 livebirths, but where income was less than $6500 the rate was 2.9. Kraus and Borhani [53] studied the occupational status of the father and discovered that the risk for the infant of fathers without a job or occupied as nonfarm laborers was higher than for the infants of fathers with professional, technical, or managerial positions.

In the late 1960s, the work of Strimer and his colleagues,[98] as well as our own,[111] was directed toward a clearer understanding of the relationship of social and economic factors to sudden infant death. We concluded that (a) the rate was higher among the poor than among the well-to-do, no matter the race or minority status and (b) the rate was higher among minority nonwhites (predominantly black) than among whites, despite income.

Factors Related to the Infant

Age of the Infant at Death. A number of workers in the past, as well as in recent years, have examined the incidence of sudden, unexplained infant deaths by age at death. Froggatt [39] in his careful study of 162 cases observed the mean age to be 18.1 weeks and the median 13.8. Kraus and Borhani's study [53] is particularly interesting inasmuch as they compared an observed mean age of 2.9 months and a median of 2.4 with comparable peaks for infant deaths due to all other causes in the same geographic area (4.6 and 3.3 months respectively). The differences prove to be statistically significant.

Kraus and others comment on the rather surprising fact that infants are relatively immune to sudden, unexplained death during the first 3 weeks of life.

Birth Weight of the Infant and Prematurity. Kraus and Borhani [53] noted a direct and inverse gradient between the weight of the affected baby at birth and the rate of postneonatal, sudden unexplained death ranging from 0.87 per 1000 livebirths among those who had weighed 4501 gm and more at birth, up to 6.55 per 1000 livebirths in those whose birth weight had been between 1501 and 2000 gm. Bergman et al [14a] similarly observed that the incidence of death among infants whose birth weight had been between 3.5 and 4.0 pounds was 10 times greater than that for infants who had weighed between 7.5 and 8.5 pounds at birth.

Froggatt et al [40a, b] on the other hand, using multiple regression analysis determined that birth weight may correlate with, but is not per se an important determinant of sudden, unexplained infant death. In addition, according to the analytic study of Kraus et al,[54] however, prematurity itself is not a strong determining factor.

Sex of the Infant. In their survey, Kraus and Borhani [53] reported the rate of occurrence of sudden death among male infants to be 1.82 per 1000 livebirths as compared with a rate of only 1.26 for females.

In five other series published in the 1970s, the sex ratio is strikingly consistent (Table 3). However, it is important to point out that in the Kraus series the ratio is not significantly different from the ratio of males to females among livebirths, and in Froggatt's, the ratio is similar to that for all infant mortality.

Race of the Infant. The most detailed information available presently on

TABLE 3. Percent Males in 5 Recently Published Series of Sudden Unexplained Infant Deaths

Author	*Year*	*Location*	*Percent Male*
Houstek [51]	1970	Czechoslovakia	58
Fedrick [33]	1973	Oxford Linkage Area, Great Britain	58
Froggatt [40a]	1971	Belfast, Northern Ireland	58.6
Borhani [18]	1973	California	58.6
Bergman [14a]	1972	King County, Washington	59

racial differences in the sudden infant death event are those derived from Kraus' series of 525 autopsied infants.[53] The distribution of deaths by race was found to be significantly different from that expected on the basis of proportionate distribution of livebirths (Table 4).

TABLE 4. Race of the Infant in Series of 525 Sudden Unexplained Infant Deaths *

Race	*Rate/1000 Livebirths*
Oriental (Chinese and Japanese American)	0.51
White (other than Mexican American)	1.32
Mexican American	1.74
Black	2.92
American Indian	5.93

* From Kraus and Borhani.[53]

As an amplification of this, Bergman et al [14a] showed a marked excess in death rates for males if they were white but not for nonwhites. Similarly Kraus and his co-workers [53, 54] observed the male excess among whites and Orientals, but not among blacks and American Indians. In fact, the death rate he observed among American Indian female infants (7.13 per 1000 livebirths) is the highest rate thus far reported for any sex-race group.

MULTIPLE BIRTHS. The risk of sudden death for the infant born of a multiple birth is undoubtedly greater than that of the singleton birth. Kraus and Borhani [53] presented risk figures of 8.33 per 1000 livebirths for triplets, 3.87 for twins, and 1.46 for singletons. It is likely, however, from these and other data that the increased risk is fundamentally related to birth weight.

In a recently published study of twin deaths, it was noted that like-sexed and unliked-sexed pairs are equally affected, suggesting that environmental rather than genetic factors are more influential.[92]

GENETIC FACTORS AND RECURRENCES WITHIN FAMILIES. Judging from currently available data, it would seem that sudden, unexplained infant death is not genetically controlled. Beckwith [7] has reviewed the reported cases of recurrence among subsequent siblings in 11 published series and declared the somewhat enhanced risk subsequent siblings experience to be less than would be expected were it a mendelian trait.

In Froggatt's series [40a, b] the recurrence rate among siblings was 4 to 7 times the random risk, or between 11.1 and 22.1 per 1000 siblings at risk. The previously mentioned twin study provides further evidence that the event is not inherited—even as a recessive trait. There is no report in the literature to date of this event occurring in an instance of parental consanguinity.

HEALTH OF THE AFFECTED INFANT. As recently as a decade ago, all concerned would have attested to the fact that usually the infant who dies suddenly and inexplicably has been, in general, a healthy baby—not often ill—and well developed. Now there is a growing body of evidence to the contrary.

Borhani's report [18] noted that 64 percent of the 128 infants considered had had an episode of sickness, mostly a cold or "the sniffles," some time before death. More than 50 percent of the illnesses occurred during the two weeks preceding death.

Froggatt's assessment[40a, b] of the affected infants' postnatal health, in his study of 162 cases, led him to the conclusion they had experienced an increased incidence of minor illness during the week, and especially the last 24 hours, before death.

FEEDING OF THE INFANT. Froggatt's detailed analysis[40a, b] of the feeding histories of affected infants revealed almost identical feeding patterns for those affected and matched controls. Of the infants in Houstek's series,[51] 32 were fully breast fed, and 7 of Bergman's[14a] had never received any cow's milk but had been given instead soy and goat's milk formulas. We are aware of 5 instances in which infants have died of crib death often having been exclusively breast fed, and Froggatt has reported 2 such cases.[40a]

This information leads us to believe that sensitivity to the proteins of cow's milk is probably not related to unexplained infant death and that breast feeding, even when exclusive of any supplemental feeding, does not protect against the event.

SLEEP STATE AT THE TIME OF DEATH. Inasmuch as the great majority of unexplained infant deaths occur between midnight and 9 A.M., are not observed, and are apparently silent and without struggle, it is assumed that they happen while the infant is asleep. This is, of course, undocumented since no such death has yet been recorded while the subject was being monitored for sleep state.

POSITION OF THE INFANT AT DEATH. In the series of 170 sudden infant deaths analyzed by Bergman et al,[14a] specific data are given with regard to the position of the infant's body in death. In 50 percent, the infant lay on the abdomen, half of these face down and half, to the side. Four percent lay on their backs and 46 percent on their sides. Froggatt[39] reported that 76 percent were lying on their sides; and in Houstek's experience,[51] 7 percent died in their mothers' arms, 61 percent lying flat on their backs, 10 percent on the abdomen, and 8 percent on the side. Thus, there seems to be no consistent pattern as to position, much would appear to depend upon local custom and the matter is probably of no consequence.

Factors Related to the Mother

MATERNAL AGE AND BIRTH ORDER. Even in the last 5 years, several authors have reported what has been repeatedly observed in the past: The highest rate of sudden, unexplained infant death is seen among mothers less than 20 years old, with a gradient indicating clearly that the older the mother, the lower the risk of sudden death for her baby.[14a, 53, 54] Using multifactorial analysis, Froggatt[40a] determined a significantly increased risk under the circumstances of combined young maternal age and increased parity.

LEGITIMACY OF BIRTH. In Kraus' report,[54] it is noted that the rate of death among illegitimate infants was almost twice as high as that for babies considered to have been legitimate.

PRENATAL CARE AND HEALTH OF THE MOTHER. The risk for crib death among infants whose mothers have received no prenatal care at all appears to be more than four times as great as that for those infants whose mothers have received such care consistently, beginning in the early months of pregnancy.[53, 95]

Apparently, infants born to mothers maintained on methadone for opium addiction are at special risk in this regard.[77] Protestos,[78] Bergman,[10] Schrauzer et al,[84] and Steele [91, 95] have all observed a higher rate of occurrence among the infants of mothers who smoke than among those of mothers who do not.

Environmental Factors

Seasonal Variation and Weather as a Factor. As in the past, most investigators who have reported recently on this phenomenon record a preponderance of deaths during the winter months.[14a, 18, 33, 40a, 51, 53] This curve is independent of monthly fluctuation in the number of livebirths, and the temporal distribution is different from that of other postneonatal deaths.[40a, 53]

Weather as a Factor. Probably the single most definitive analysis of the weather as a potential factor in the cause of sudden, unexplained infant death is that of Fedrick.[33] She has documented the mean measurements for each of 8 meteorologic measurements by month over a 5-year period and correlated those data with the rate of occurrence of crib death in each 30-day period; as might have been predicted, she has demonstrated a striking negative association with temperature as well as with hours of sunshine and positive correlations with wind speed, relative humidity, and snowfall.

Day of the Week. In our own experience [111] and that of Borhani et al,[18] no one day of the week showed any striking correlation with increased numbers of crib deaths. Froggatt [40a, b] reported more deaths on Sundays, Peterson et al [75] an excess on Saturdays, Richards and McIntosh [80c] on Tuesdays, and Fedrick [33] on Thursdays.

Time of Day. Inasmuch as the great majority of unexplained infant deaths are not actually observed, most investigators arbitrarily calculate the time of death as the midpoint between the moment the infant was last seen alive and the moment he was discovered dead. Using 3 consecutive 8-hour periods beginning with midnight, Froggatt et al [40a] found the following percentage distribution: 50.0, 36.4, and 13.6.

Place of Death. According to the data of Fedrick,[33] 70 percent of the crib deaths in her series occurred at home or at some other noninstitutional address, 6.8 percent died en route to the hospital, and 22.3 percent in the hospital. This distribution is probably representative of the experience of most investigators. However, many series include the occasional sudden death in a baby carriage or car bed.

Space-Time Clustering. Bergman et al [14a] reported a suggestion of "epidemicity" in the form of scattered small clusters in time. However, employing two different methods of statistical approach to the issue, Froggatt and his coworkers [40a, b] concluded that, on the basis of their experience, "if clustering (or 'contagion') exists, there is no evidence of it from these tests at least one of which would readily demonstrate clustering of such infective diseases as measles and poliomyelitis, as well as some which may have only an infective component, eg, Burkitt's tumor."

Results of Recent Research

Morphologic Observations at Autopsy

In addition to the recent morphologic observations published by Naeye and others, there are two new reports from Dr. J. L. Emery and his co-workers in Sheffield, England. In the first,[32] they relate their search for the site of origin of free neutral fat-laden macrophages in the cerebrospinal fluid of infants with subacute brain damage. The largest concentrations were found in the region of the fornix, the corpus callosum and its radiations, and around small blood vessels. Striking increases in the number of such cells were noted in two groups of children, those dying in the postperinatal period following episodes of respiratory distress and in a large proportion of older children presenting as unexpected deaths in infancy. The authors suggest that these changes are not specific and probably represent the result of cerebral hypoxia.

In their second paper,[26] they described in great detail lesions of the vocal cords in 91 infants dying as "cot deaths." Pathologic changes of this type have been documented before;[2, 76, 107, 116] however, this is a far more comprehensive treatment of the subject than has been published to date. Cullity and Emery [26] noted, as have others, that these lesions are not unique to infants who die in this manner, but are seen in others.

The Upper Airway: Its Morphology and Function

In a recent publication,[101] Dr. S. Tonkin of Auckland, New Zealand, presented a new hypothesis suggesting that obstruction of the airway at the level of the posterior pharynx is responsible for crib death. She proposed that this oropharyngeal occlusion results from several unique anatomic features of the upper airway of the human infant and may involve pharyngeal relaxation during sleep, a hypermobile mandible, and perhaps an enlarged tongue.

Years ago, Beckwith [9] and Bergman et al [12] proposed the hypothesis that this sort of death was caused by a sudden spasm of the larynx; however, they found it impossible to relate that phenomenon to the state of sleep, so intimately a part of the usual history. Furthermore, their attempts to re-create the event in an experimental model were not entirely successful. In addition, shortly thereafter, French et al [36] demonstrated the absence of any postmortem radiographic evidence of nasopharyngeal obstruction in these infants.

Of particular interest with regard to the upper airway and its possible relationship to the phenomenon of sudden death in infants is the recent work of Downing and Lee [31] of Yale using the piglet as an experimental model and Sessle et al,[97] of Toronto using kittens and cats. The animal was anesthetized, and the investigators cannulated both the distal and the proximal segments of the trachea separately. While pressure changes were being recorded in the distal portion, a number of different test fluids were introduced into the larynx. Whereas normal saline produced little or no change in the animals' respiratory pattern or arterial pressure, the instillation of distilled water or cow's milk triggered an inhibitory chemoreflex with apnea in the majority, which was fatal in many. Topical application of procaine or transection of the superior laryngeal nerve abolished the response, but electrical stimulation of the superior laryngeal nerve mimicked the original experiment.

Additional studies demonstrated that the apneic response to chemical laryngeal stimulation is enhanced when the animal's central respiratory drive is depressed by the administration of chloralose or by severe anemia.

As an extension of these experiments, Sessle's group recorded the activity of hundreds of single cells in the solitary tract nucleus of cats and kittens during peripheral stimulation to nasal mucosa, recurrent laryngeal nerves, etc. The rhythmic discharge of these cells was suppressed, particularly in kittens, by a variety of stimuli, suggesting that the effect on respiration of neurologic feedback from the upper respiratory tract may be great in young animals and may be relevant to their sudden death.

Years ago, Shaw,[80] a prominent pediatrician, proposed that occlusion of the upper airway by nasal mucosal swelling during upper respiratory infection was responsible for the majority of crib deaths. This author contended that infants of the appropriate age are obligate nose breathers and cannot respond to obstruction of their nasal passages by breathing orally. This interesting hypothesis is accepted by many clinicians but has not yet been substantiated in the human, although it has in the infant monkey.[37] The principal difficulty with this hypothesis, however, is that obligate nose breathing is normally present from birth on, whereas the peak incidence of crib death occurs from 2 to 4 months of age, largely sparing the first months of life.

Currently, investigators are engaged in exploring a variety of aspects of the upper airway and the possibility of its participation in a mechanism or mechanisms for sudden infant death. These explorations include studies of the gross anatomy,[99a] detailed morphometry in x-rays,[34] the changing histologic features during this critical period of life,[34, 99a] functional aspects by way of motion pictures taken through a fiberoptic endoscope,[34] physiologic and reflex responses,[83, 99a] and biomechanical studies.[34]

The Role of Viral Infection

In three independent research projects [19, 80a, 105] reported in the early 1970s, a variety of viruses were isolated from a variety of anatomic sites in sizable series of autopsies that included at least 341 instances of crib death. Virtually every virus that could have been recovered and identified at the time was. These included parainfluenza 3 and 1, respiratory syncytial virus, adenovirus types 1, 2, 3, and untyped, rhinovirus, herpes simplex, enterovirus (nonpolio and untyped as well as polio), echovirus, Coxsackie virus B, and others. No one virus predominated in any series, and the sites of recovery included bowel, trachea, nasal passages, lung, myocardium, thymic extract, brain, suprarenal fat, blood cells, and serum. The rate of isolation among these infants as compared with that from control subjects did not suggest that viral infection was, in itself, an important cause for sudden infant death. The accumulated data rather pointed away from disseminated viral infection as a major factor in any ultimate mechanism. The possibility remains, however, that these ordinary viruses may participate in some mechanism, not yet understood, which eventuates in this type of death.

Recently, the role of epidemics of viral disease was systematically investigated[71] over a 42-month period in Chicago, during which time 778 such deaths occurred in the community, and there were seven independent identifiable outbreaks of specific viral infections. Influenza A was the only infection found to have a statistically significant association with sudden infant death, but the association was not highly significant statistically. Four epidemics of respiratory syncytial virus infection were not statistically associated with the sudden deaths.

We have observed individual instances of generalized cytomegalovirus infection in infants who appeared to die suddenly and unexpectedly, and such cases have been reported in recent literature[78, 91] as well. However, it would not seem that this particular infection can, of itself, play an important role in any ultimate mechanism among the majority of crib deaths.

Results of Recent Biochemical Research

For many years, some authors contended that altered electrolyte levels might be responsible for the sudden infant death syndrome. Because of technical limitations, however, the theory could neither be proved nor disproved. Recently, using postmortem analysis of vitreous humor, it has been possible to determine the concentrations of certain chemicals, inasmuch it has been established that their concentration in vitreous humor does indeed reflect antemortem serum concentration. In a study of 27 infants who died of crib death and 9 controls, Blumenfeld and Catherman[16] found no significant differences in the concentrations of sodium, potassium, chloride, calcium, or magnesium and on that basis declared that crib death is probably not attributable to chronic imbalance of any of these electrolytes nor to any condition that might produce such an imbalance.

In a similar study conducted in Sheffield, England, Dr. John L. Emery and his associates[32, 41] found hypernatremia, either with or without uremia, in half of a series of 25 "cot deaths." However, a special powder provided by the government there for the preparation of infant formulas is apparently frequently incorrectly dissolved by mothers, resulting in the relatively common administration of high solute feedings and water deficiency. This, it would seem, must be the explanation for the discrepancy between their results and those of Blumenfeld and Catherman.[16]

Preliminary data are currently accumulating in the laboratory of Dr. Harold Mars[58] of Case Western Reserve suggesting that biogenic amine metabolism may be intimately involved in the genesis of neonatal apneic episodes and also of the sudden infant death syndrome. The biogenic amines are potent biologic substances either possessing neurotransmitter functions or acting as modulators of neurophysiologic activity. Dr. Mars' attention was drawn to the matter by the chance observation of an altered urinary excretion pattern of dopa, dopamine, serotonin, and other amines in a "near-miss" infant. Later, he examined concentrations of those substances in the caudate nuclei and brain stems of 13 infants who had died of sudden death and three controls. Although no specific conclusions could be drawn from the data because of variability in content, it did appear that the concentrations of dopa, dopamine, noradrenalin, and decarboxylase were different in the two groups. He is continuing with this investigation at the present time.

The Role of Infection, Immunologic Mechanisms, and Immunologic Capability

In early life, the infant is suddenly exposed to a wide variety of antigens including microorganisms, pharmacologic agents, and a wide range of environmental substances. His immune reaction to any of these may differ markedly from that of the adult and may serve to jeopardize rather than protect him.[27] It is conceivable that two specific aspects of that encounter may set the stage for the sudden infant death syndrome: primary encounters with a multitude of antigens including infectious agents and a rapidly developing immune response.

There are, unfortunately, many aspects of immune mechanisms at this particular age which are not yet fully understood. These include the various components of the complement system and the ways in which they can be activated, the ontogeny and function of interferon, the serum and cellular aspects of phagocytosis, the role of the autonomic nervous system and hormonal factors as they influence the allergic response, and cell-mediated immune reactions.[27]

The innumerable facets, the complexity, and the interplay of host responses to antigenic challenge would appear at this time to constitute an almost insurmountable task for the investigator who seeks to clarify them and the role or roles they may play with regard to crib death.

In recent years, isolated specific studies have been conducted elucidating just a few of the countless aspects of these systems. In 1971, Urquhart and his co-workers [104] published their observation that antiglobulin antibody had been found in half of 39 instances of sudden infant death and half of 8 deaths due to lower respiratory or gastrointestinal infection. On the other hand, the antibody was found in only 5 percent of 21 living controls with a variety of inflammatory processes. The authors' assumption was that this antibody might produce fatal anaphylaxis.[104] However, these observations were not confirmed in the work of Clausen and others [25] who in 1973, reported *no* elevation of antiglobulin antibodies in the 7 samples of sera they examined.

In 1969, Khan [52] demonstrated elevated IgM in the sera of 18 of 24 (75 percent) crib deaths and 11 of 14 explained infant deaths, which led him to believe that infection may have been a factor in the ultimate mechanism of death. Similarly, Urquhart [106] in 1972, found elevation of IgM in 67 percent (26 of 39). By contrast, Clausen et al [25] in 1973 and Turner et al [103] in 1975 both observed that IgM levels in the sera of victims closely resembled those of noninfected control groups.

Beckwith,[7] in a separate study of 8400 cord bloods found no elevation of IgM in any of 15 infants who, on follow-up, had been discovered to have succumbed to the syndrome of sudden infant death.

Serum levels of IgE at autopsy have been investigated by at least two groups. Clausen et al [25] found them to be similar to those for controls in 17 cases of sudden death, whereas Turner and his co-workers [103] observed the prevalence of specific IgE antibodies to house-dust mite, Aspergillus fumigatus, and bovine beta-lactoglobulin to be significantly greater among crib deaths than among controls.

Titers for specific antibodies to 14 common viral agents were determined in serum obtained at autopsy and proved to be similar among both sudden deaths and control patients.[25] The third component of complement has been reported as not depressed [25] and serum interferon not increased.[80a]

Studies in Progress

Apnea as a Hypothetical Mechanism for Sudden Unexplained Infant Death

Undoubtedly, the single most exciting current hypothesis as to the ultimate mechanism of at least some crib deaths is that of sudden spontaneous protracted apnea, probably related to sleep. This thesis was popularized in 1972 by Steinschneider [96] with his observation that two infants he had been monitoring because of repeated episodes of apnea died suddenly, unexpectedly, and inexplicably. There are unquestionably features of this proposal that are compatible with facts already established concerning crib death. The unrevealing nature of the postmortem examination is one. The tendency for such deaths to occur late at night seems to correspond with the suggested relationship of these apneic spells to sleep.

Recently, Steinschneider [97] and Guilleminault et al [43] have shown that infants subject to repeated apneic spells will experience them more frequently during episodes of nasopharyngitis; in accordance with that observation is the oft-noted presence of inflammatory change in the upper airway in 50 to 60 percent of autopsies on infants who die of crib death.

Of fundamental importance in this regard is the definition of the term *apnea*. Apparently, all infants normally experience many little episodes or short periods of not breathing, or the cessation of breathing. These are said to be a physiologic component of sleep in all infants, and thus it becomes rather arbitrary to decide upon the physiologic limits of such episodes. For purposes of research, Dement and Anders [29] chose to define apnea as those periods of the cessation of respiration exceeding 10 seconds. Episodes from 3 to 9 seconds they refer to as "respiratory pauses." Steinschneider [96] has used 15 seconds as the dividing line, defining anything exceeding that as apnea.

Guilleminault et al,[43] and Dement and Anders [29] of Stanford's Neonatal Sleep Research Unit have described three different kinds of sleep-apnea: central or diaphragmatic, in which chest movements cease; upper airway or obstructive apnea, in which chest and diaphragm move but no air moves in or out of the nose; and mixed central and obstructive. These investigators feel that the distinction between the three different types of apnea is important because (a) the most severe episodes of bradycardia are associated with upper airway or mixed types, (b) the associated bradycardia lasts longer with upper airway and mixed types than it does with central apnea, and (c) there is greater oxygen desaturation during upper airway apnea.

Using long-term (from 12 to 24 hours) polygraphic recordings, they monitored 40 infants of appropriate age in three categories: 25 children of parents suffering from sleep apnea; 15 premature babies; and 8 so-called near-misses.

On every infant they monitored the following:

1. Electroencephalogram
2. Electro-oculogram
3. Chin electromyogram
4. Respiration by means of 2 strain gauges, 1 thoracic and 1 abdominal
5. Respiration by means of 2 thermistors, in front of the mouth and in front of the nostril
6. Electrocardiogram
7. Behavioral criteria (checked by observers)

In some near-miss infants, an endoesophageal pressure transducer was employed to monitor endothoracic pressure, and in all of them, the oxygen saturation curve was followed continuously by means of an ear oximeter.

From these studies, they have learned that none of the offspring of adults with sleep apnea appeared to be abnormal with regard to any of the factors examined. Furthermore, they noted that normal premature infants often experience apneic episodes. Those weighing less than 2000 gm experience predominantly central apnea without accompanying bradycardia, whereas those weighing more than 2000 gm have obstructive or a mixed type of apnea often associated with bradycardia.

All of their eight near-misses were encountered during the winter, and two had positive family histories (one child had two near-misses among siblings and the other, a sibling who had succumbed to crib death). All three types of apnea were observed in near-miss infants; however one of them exhibited no apnea at all but only short spontaneous runs of bradycardia.

In this regard, it should be mentioned that in the study of 15 near-miss infants conducted by Friedman et al [38] at the Los Angeles LAC-USC Medical Center polygraphic recordings of seven variable factors were obtained (eight for 12 hours and seven for 2 hours). The near-miss infants as a group showed less apnea than age-matched controls. They exhibited less beat-to-beat cardiac variability, and no one single variable separated the near-miss infants from controls.

A number of investigators have hypothesized that rapid eye movement (REM) or active sleep would be the "at risk" period. The recordings of Guilleminault et al [43] and Kraus et al.[55] however, indicated that the worst apneic episodes (longest duration and greatest oxygen desaturation during upper airway apnea associated with bradycardia) occurred *not* during REM sleep but always in quiet or indeterminate sleep.

In summary then, the role of apnea with regard to sudden unexplained infant death is not yet clearly defined, although there are some suggestions that it may represent the ultimate mechanism of death for some, or even many, of these deaths.

For that reason, the National Institute of Child Health and Human Development is supporting a number of careful investigations of the matter. In the laboratory of Elliott Weitzman in Montefiore Hospital and Medical Center in New York City near-misses and appropriate controls are being monitored for selected respiratory, cardiac, and neurophysiologic factors.[115] In Los Angeles, the group of Hodgman et al [49] is deeply involved in 12-hour continuous polygraphic recordings on subsequent siblings of infants who have died inexplicably or of near-misses together with low-risk control groups. The data accumulated are being correlated with prenatal recordings of fetal activity and fetal electrocardiograms. They intend to describe the development of sleep and cardiopulmonary regulation in infants at high and low risk in an attempt to identify normal and abnormal patterns that might provide clues to the mechanism of sudden unexplained death.

Other related current investigations include sleep studies in twins,[12] a survey of biogenic amine metabolism as a reflection of immaturity or instability of the autonomic nervous system,[58] apnea resulting from nasal occlusion in infant pigs,[1] and the development of sleep state patterns and the characteristics of apneic episodes in kittens.[61]

One important aspect of this hypothesis is its practical clinical application. If spontaneous protracted apnea is indeed responsible for a significant number of crib deaths, then apnea monitoring, and even home monitoring, would appear to be indicated and, in fact, this is being employed or recommended by some physicians in certain instances. There are, however, three significant difficulties in this regard: The infant at risk cannot yet be definitively identified. Secondly, as Guilleminault et al [43] pointed out, apnea monitors, such as are used in the home, detect only the presence or absence of thoracic or abdominal movements and will be ineffective in cases of upper airway obstruction in which respiratory movements actually *increase*. Finally, at least one infant has been reported to have died of crib death while on an apnea monitor in a hospital intensive care nursery.[57]

Some prominent pediatricians oppose the use of home monitors simply because the mechanical device is fraught with technical difficulties and is therefore apt to alarm parents unnecessarily and all too frequently. They are convinced that the mechanism is a distinct obstacle to normal, natural, easy mother-infant relationships, interfering physically, psychologically, and emotionally.[13] Furthermore, they contend that the entire atmosphere of the home "burdened" with such a monitor is altered in a deleterious fashion and that parents, ever aware of the device, are necessarily tense and anxious all the time. Even the American Academy of Pediatrics [3] has taken an official stand on this side of the disagreement.

However, there are many parents, in addition to professionals, who favor home monitors, especially those parents who have already lost one infant to this tragedy and fear more than anything else the loss of another. They are willing to make any sacrifice and suffer any inconvenience for the sake of the assurance that, should their living infant stop breathing for an undue period of time, they will be alerted by a monitor in time to save the child's life.

And so today, the controversy still smoulders with supporters on both sides. Systematic investigation of the feasibility and psychological effects of apnea monitoring at home are underway in at least two medical centers.[45, 48]

Identification of the Infant at Risk

Ideally, physicians should be able to identify the infant at risk for the sudden infant death syndrome before the fact. However, despite recent developments in our knowledge concerning the potential victim and his various characteristics, no one can yet single him out. We do know that he is more likely than not to be a male from a minority group, of low socioeconomic origin, and to have been born of a young mother either prematurely or of low birth weight. There are apt to have been problems with establishment of his respiration initially. He was probably rather quiet with a relatively poor or peculiar cry or poor capacity to suck. There will be a history that he did not develop or gain weight adequately, etc. Yet even these features are so nonspecific and so common that they are actually insufficient to yield a high-risk population for purposes of investigation.

There are two approaches that could conceivably be used to identify a group of infants as being at special risk for this event, whether for purposes of investigation or even prevention. The first it to assume that the criteria are known (eg, frequent protracted episodes of apnea) and to select accordingly, and the second approach is to establish criteria on the basis of retrospective analysis of historical characteristics.

An interesting example of the former was published by Friedman and her coworkers[38] from the University of Southern California. They selected 15 infants characterized as near-misses on the basis of unexplained apneic episodes occurring after the neonatal period, the assumption being that spontaneous protracted apnea is the essential criterion. Their 12-hour polygraphic records were compared with those for age-matched controls. Although there were individual exceptions, the near-miss infants, as a group, showed less apnea, less beat-to-beat cardiac variability, and longer episodes of wakefulness than the controls. No one single variable separated the near-misses from control infants; however, one infant being studied exhibited bradycardia; one, fixed heart rate; and one, apnea. None died subsequently (to the time of publication).

An example of the latter approach, by contrast, is that of Carpenter and Emery.[24a, b] The investigators first analyzed retrospectively the detailed obstetric and perinatal histories of 119 sudden unexpected infant deaths (explained and unexplained), an obviously high-risk group, and 135 live controls born in the same hospitals. Eight variable factors that could be ascertained at or soon after birth were selected out of 40 as having the most prognostic value. These were:

1. Mother's age. Infants of young mothers are most susceptible.
2. Birth order. The risk for the infant increases as his order increases.
3. Maternal blood group. A is the most vulnerable, O next, and B or AB least.
4. Intention to breast feed. A bottle-fed baby is more at risk.
5. Duration of second stage of labor. The shorter this stage the greater the risk.
6. Urinary tract infection. Maternal urinary tract infections during gestation increases the risk.
7. Polyhydramnios.
8. Prematurity. Prematurity increases the risk if the infant is less than 2500 gm or 37 weeks gestation.

The investigators calculated that this high-risk group had had a relative probability of dying 8.6 times greater than that of the controls. Their ensuing prospective or second-stage study was based upon this set of 8 criteria.

There were 4 second or prospective study groups: Group 1 included all of the infants born the following year predicted to be at low risk (5077); Group 2 included roughly half of those thought to be at high risk who were then supplied with regular nursing-care visits to the home (354); Group 3 included the other half of the high-risk group for whom no such visits were supplied (477); and Group 4 included 80 families who although at high risk elected not to participate in the project at all.

Of the 6003 livebirths that occurred in 1973 in Sheffield, there were 12 sudden infant deaths. The observed relative risk among infants of Group 3, or those high-risk infants deliberately *not* followed at home, was 6.1 times greater than that for the low-risk infants (Group 1). None of the high-risk infants followed at home (Group 2) died. And the risk for those who were thought to be at high risk and who had not elected to participate in any way in the study (Group 4), was greatest of all, 9.1 times greater than that for the low-risk group. The numbers of admissions to hospital among the 3 high-risk groups paralleled these data. The authors concluded that this broad-based mode of selection would appear to be the most feasible.

Since statistics show that subsequent siblings of infants who have died of crib death are at greater risk (4 to 7 times) than children of the same age in the population in general,[4,90] some investigators have elected to employ them as subjects for their research endeavors. Their probability of dying suddenly and inexplicably, however, is still only 8 to 14 out of every 1000 livebirths.

Along the same lines, other scientists have selected the twins of affected infants as logical study subjects. It has been determined[92] that surviving twins are indeed at greater risk than others; of 17 pairs of twins who died suddenly at home, 14 co-twins died within 30 days of the first deaths.

Nevertheless, in both of these relationships, it has been ascertained that the increased vulnerability of the survivor is not based on inheritance but rather upon a common "environmental" experience.

The exception to this may be the occasional set of sibs or twins, both with recurrent apneic or cyanotic spells, each of whom eventually succumbs to the syndrome.[96] Families of that type may be manifesting a familial disease which at the moment lurks unrecognized within the great body of sudden, unexplained infant deaths.

The Experimental Animal as a Model

Despite expectations to the contrary, no naturally occurring animal equivalent to the human sudden infant death syndrome has yet been identified and definitively documented. However, since the human infant cannot be used in the conduct of many experiments that appear to be indicated in light of new knowledge in the area, a number of investigators have begun to employ animals in their systematic approach to these explorations.

Apes and monkeys have been and are being used in research into the developmental aspects of the anatomy, histology, physiologic responses, and dynamics of the upper airway.[28, 34, 37, 90] At least two laboratories are engaged in examination of the relationship of fatal apnea to the laryngeal chemoreceptor system and naso-laryngeal-cardiopulmonary reflexes in infant pigs.[17, 31]

Kittens and cats are the subjects of at least five projects now in progress in the exploration of the role of viral infection, immunoglobulins, the physiologic responses of the upper airway, respiratory behavior in its relationship to sleep state, and the long QT syndrome.[28, 61, 72, 85, 87] Three current studies of relevant cardiovascular physiology and protective laryngeal closure reflexes involve the use of fetal, newborn, and infant dogs of different breeds.[28, 53, 88] Other animals being utilized as experimental models are rats, rabbits, calves, guinea pigs, and lambs.[20, 28, 30, 88]

Current Issues of Interest

Welfare of Families

In the summer of 1972, Bergman[9] conducted a nationwide survey to determine how the families of infants who died suddenly and inexplicably were being treated in various cities and counties throughout this country. He and his coworkers discovered that although affected parents were being dealt with in a humane manner in a number of areas, the situation was deplorable in many others. Ignorance and apathy were largely to blame for inadequate support and counseling. But in some instances, the attitudes of those in authority were inexcusably suspicious and even accusatory.

With those data at hand, he and other members of the National Foundation for Sudden Infant Death, Inc., launched an independent program in an attempt to influence local authorities to improve their systems of case management. Simultaneously they, together with members of The Guild for Infant Survival, another parent group, sought to persuade Congress to pass a law to improve the management of such situations. The law was passed, and as a consequence, in the summer of 1975, 24 management centers were established in different cities and states across the country. The objectives of these centers are (a) to provide autopsies for infants who die suddenly and unexpectedly; (b) to provide information about sudden and unexplained infant death in general and about the specific relevant autopsy observations in particular to affected families, as soon as possible; (c) to provide follow-up counseling for families as long as indicated; and (d) to establish educational programs on the subject for all concerned and especially doctors, nurses, police, and firemen.

In the fall of 1975, Bergman[14b] reported on the early results of his campaign —both through the independent program of the Foundation and the 24 management centers. In general, there had been appreciable improvement, at least in most of the sites revisited for evaluation.

Certainly, all physicians involved in these tragic situations have a responsibility to aid the afflicted families in any way or ways they can.[11, 62] In some instances, the pathologists performing the autopsies have assisted to the extent that they themselves talk with the parents, after completion of the necropsy, informing them directly and promptly of their findings and assuring them that as parents and guardians of the child they had not overlooked any recognizable disease process. This in itself removes some element of guilt and provides a measure of assurance.

Breast Feeding

Some have suggested that bottle feeding may predispose infants to sudden death either by means of a hypersensitivity reaction to the foreign proteins contained in the formula [73] or by means of an acquired immune deficit.[44] Although sudden, unexplained infant death does occur more frequently among artificially fed than breast-fed infants, in any civilized population at the present time, there are far more bottle-fed than breast-fed babies. However, Schrauzer et al [84] did perform a statistical analysis in San Diego County and found no difference between suddenly dead infants and controls with regard to breast feeding. As a matter of fact, crib-death babies who had been either totally or partially breast fed died at an earlier age than those who had been fed by formula.

The issue of allergy to the proteins of cow's milk has been dealt with at some length elsewhere.[108] It would seem now an untenable hypothesis.

We have observed at least five instances of crib death occurring in infants who had never received any feeding except breast milk. Other investigators have also reported sudden, unexplained death in infants exclusively breast fed.[3] This at least suggests that the immunologic components of mother's milk do not necessarily protect against the event.

Other Current Hypotheses

In 1972, Dr. Joan Caddell [20] proposed the hypothesis that sudden, unexpected death in infancy is a preventable condition resulting from the magnesium deprivation syndrome of growth. This syndrome is most striking in young, rapidly developing infants and animals receiving magnesium-poor breast milk or on an artificial diet poor in magnesium in relation to its content of calcium, phosphorus, and protein, nutrients that increase the metabolic requirement for magnesium. Premature and low-birth weight infants with poor magnesium stores and rapid growth rates are most vulnerable. She suggested that the pathogenesis of the syndrome of sudden infant death was based on magnesium deficiency leading to the liberation of histamine and histamine shock with bronchospasm, apnea, emphysema, and increased vascular permeability resulting in pulmonary edema and circulatory collapse.

Swift and Emery,[99b] later in 1972 [99a] published their observation that magnesium levels in the vitreous humor in four cases of "cot death" were completely within the range of normal. Later, others [16, 74] noted normal levels in a total of 32 victims.[7, 8, 16]

Despite these two sets of observations, Dr. Caddell is continuing her research in this area studying the magnesium status of postpartum women, neonates, and infants from one to six months of age employing a parenteral magnesium-loading test. She is also using very young rats fed magnesium deficient diets as animal models.[21]

In 1971, it was first proposed[63] that deficiency of selenium or vitamin E might be responsible for crib death. This thesis was later refuted by others in publications in 1973[82] and 1975.[84] Vitamin E and plasma selenium levels among infants dying of the sudden infant death syndrome proved to be approximately the same as those of normal controls.

Progress in Research to Date

Dr. Eileen Hasselmeyer[46, 47] has described the path of investigation in the realm of crib death as being similar to that of other complex medical problems of the past. First came observation and documentation resulting in recognition of the problem by the scientific and lay communities in the late 1950s. Recognition served to stimulate epidemiologic research efforts of the early 1960s and descriptions of the pathologic features of the entity. Later, a host of hypotheses were formulated, a definition was agreed upon, and diagnostic criteria established. A considerable body of scientific literature began to accumulate in the late 1960s. And now, in the mid-1970s academic interest has peaked, and numerous worthwhile research endeavors are proceeding apace.

Research in the Future

Highly qualified investigators are currently exploring a wide variety of approaches to better understanding the ultimate mechanism of the sudden, unexpected, and unexplained infant death. Included are studies directed at better understanding the development of cardiopulmonary reflexes, chemosensitive systems, particularly in the upper airway, the results of "respiratory loading" in the infant, maturation of the larynx, immunologic aspects, the possibility of genetic susceptibility, and possible neurophysiologic factors. At least two academic centers are engaged in detailed follow-up studies of selected infants judged to be at special risk.

The National Institute of Child Health and Human Development is and has been for some years deeply committed to a program intended to stimulate and support solid productive research in this area. There can be no question that they have accomplished a great deal, and we look forward with optimism to the results of the work they have caused to be done.

Conclusion

In summary, the first half of this decade has witnessed almost revolutionary changes with regard to sudden, unexplained infant deaths. Perhaps the most significant of these is the concept—ever increasing in strength and support—that the victim of the tragedy is not fundamentally a normal or healthy infant and probably never was, even before birth.

Secondly, there has been a tremendous increase in awareness of and interest in the topic, not only among medical people and academicians (who now more than ever have begun to explore the phenomenon systematically), but also among the laity.

And lastly, government agencies have taken a more active role, not only in promoting research, which they were doing previously, but also in providing for the welfare of afflicted families. Now more than ever, it seems conceivable that we may one day understand the cause or causes of these many deaths that are presently inexplicable and thus may prevent their occurrence.

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United States Senate
COMMITTEE ON APPROPRIATIONS
WASHINGTON, D.C. 20510

April 5, 1978

The Honorable Alan Cranston, Chairman
Subcommittee on Child and Human Development
Committee on Human Resources
United States Senate
Washington, D. C. 20510

Dear Mr. Chairman:

As the Subcommittee nears completion of its work on renewal of the Sudden Infant Death Syndrome Act of 1974, I would appreciate your consideration of my views on several items that I believe to be important on both SIDS research and on the SIDS Information and Counseling Program.

First, regarding research:

1. The National Institute of Child Health and Human Development should be required to recognize SIDS as a top priority area within its greater program of research on the special health problems of mothers, children, and families.

   High quality research has been and continues to be the key to finding the causes of this terrible syndrome. This may take the form of research directly into SIDS itself, or research into such related and promising fields as high risk pregnancy, prematurity and low-birthweight. I have no wish to undermine the Institute's insistence upon excellence in its research to assure speedy determination of the causes of SIDS by specifying amounts to be spent in any area. However, it is essential that additional funds, beyond the amounts being spent in fiscal 1978, be made available to assure that the Institute is able to give substance to the priority I hope you will attach to SIDS research through your forthcoming bill.

2. I agree with the importance of the clinical application of research findings to identify infants at risk for SIDS and thereby prevent these tragic deaths. Sufficient flexibility should remain for the NICHD to work with its counterpart agencies in the Public Health Service--the Health Services Administration and the Food and Drug Administration--to determine the readiness for inclusion into health care delivery of specific techniques, procedures, or treatments evolving from the latest research.

3. I strongly recommend that SIDS research remain a part of Title XI of the Public Health Service Act and do not find it appropriate to incorporate the SIDS legislation into Title X along with the authority for Population Research and Voluntary Family Planning Programs. Combining SIDS authorities into Title X could cause incorrect implications and complications.

4. The requirement for a "clearinghouse" to collect and disseminate SIDS public information should not impinge on special activities for dissemination of research information. Dissemination of research information should be a responsibility of the NICHD which, in turn, should coordinate its information activities with companion agencies of the Public Health Service.

These points can be addressed under current provisions of the Act, or with minor changes.

Other research topics that can and should be dealt with in report language include these:

1. NICHD should be encouraged to expand its support of research on high risk pregnancies and disorders of newborns that place infants at risk for SIDS. Research findings to date indicate that SIDS may be tied to events happening before birth as well as to events in early infancy. New studies on problems of pregnancy and infancy will be important to the prevention of SIDS specifically, as well as to infant morbidity and mortality in general.

2. NICHD should be encouraged to give emphasis to strengthening research on the behavioral aspects of the SIDS problem. More research, in particular taking account of advances made in the mental health field in the areas of grief and bereavement, is needed on the psychological impact of SIDS on parents and siblings and on the counseling of affected families. It is essential that worthwhile findings be incorporated in the counseling services that are provided.

3. The Department of HEW should be encouraged to identify its Interagency Panel on the Sudden Infant Death Syndrome as the official coordinating unit for Departmental SIDS activities. This group has been successful in enhancing information exchange and minimizing duplication of effort.

I also strongly urge that the SIDS Information and Counseling program be maintained in its present form and that appropriation of $10 million be authorized for fiscal 1979 with increasing amounts in the years beyond.

Although Congress has expanded this essential program, I find that it still provides support for only 32 SIDS projects in 27 states and that a number of these do not cover an entire state.

I am advised that it will require at least $5.5 million in the new fiscal year to provide the broader coverage our Senate Appropriations Committee had in mind when it increased funding for the program for the current fiscal year. This level of funding should be made available.

Another $4.5 million is required to address the need for early identification and medical management of infants at risk of SIDS and this, too, should be made available.

I hope your Subcommittee will agree to my proposals with regard to both SIDS Research and the SIDS Information and Counseling program.

Knowing of your long interest in and concern about this major health problem which has not received the attention it deserves, I am most anxious to work with you in developing sound authorizing legislation and gladly will make myself available to discuss any of the matters I have raised.

With best wishes,

Sincerely,

Edward W. Brooke
Ranking Minority Member
Labor-HEW Appropriations
Subcommittee

[illegible]

United States Senate
COMMITTEE ON HUMAN RESOURCES
WASHINGTON, D.C. 20510

April 14, 1978

Honorable Edward W. Brooke
Ranking Minority Member
Labor-HEW Appropriations Subcommittee
Committee on Appropriations
United States Senate
Washington, D. C. 20510

Dear Ed,

Thanks so much for your letter regarding the SIDS legislation. Although I received it just a few minutes before the markup on Thursday, I believe that the bill as amended in and reported from Subcommittee addresses all of the issues you raised in your letter, with two exceptions: the authorization level, and placement of the SIDS program in title X of the Public Health Service Act.

I'm enclosing a copy of the Subcommittee memo regarding the placement issue which explains the reasons for this change.

Regarding the authorization, the recommended level represents the Subcommittee's view as to what could be adequately used for activities based on testimony presented during the March 1 hearing on this expiring legislation.

I appreciate your strong and continued support for the SIDS program. I look forward to working with you to assure continuation of these vital services in the future.

With warm regards,

Cordially,

Alan Cranston

Enclosure

Calendar No. 753

95th CONGRESS
2d Session

S. 2522

[Report No. 95–822]

IN THE SENATE OF THE UNITED STATES

February 9 (legislative day, February 6), 1978

Mr. Cranston (for himself, Mr. Williams, Mr. Javits, Mr. Riegle, and Mr. Hathaway) introduced the following bill; which was read twice and referred to the Committee on Human Resources

May 15 (legislative day, April 24), 1978

Reported by Mr. Cranston, with an amendment, and an amendment to the title

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A BILL

To amend title X of the Public Health Service Act to extend appropriations authorizations for five fiscal years.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, ~~That this Act may be cited as the "Family Planning Services and Population Research Act Extension of 1978".~~

~~Sec. 2. Title X of the Public Health Service Act (42 U.S.C. 300 et seq.) is amended by striking out in sections 1001(c), 1003(b), and 1005(b) "and" after "1977;" and in section 1004(b)(1) "and" after "1977," and inserting in each place before the period a semicolon and "and such sums as may be necessary for each of the next five fiscal years".~~

II

That this Act may be cited as the "Voluntary Family Planning Services, Population Research, and Sudden Infant Death Syndrome Amendments of 1978".

SEC. 2. Title X of the Public Health Service Act (42 U.S.C. 300 et seq.) is amended to read as follows:

"TITLE X—FAMILY PLANNING AND HUMAN DEVELOPMENT PROGRAMS

"PART A—VOLUNTARY FAMILY PLANNING AND POPULATION RESEARCH PROGRAMS

"DECLARATION OF PURPOSE

"SEC. 1000. It is the intent of this part—

"(1) to assist in making comprehensive voluntary family planning (including infertility) services readily available to all persons desiring such services;

"(2) to coordinate domestic population and family planning research with the present and future needs of family planning programs;

"(3) to improve administrative and operational supervision of domestic family planning programs and population research and other services programs related to such services;

"(4) to enable public and nonprofit private entities to plan and develop comprehensive programs of family planning services;

"(5) to develop and make readily available in-

formation (including educational materials) on family planning and population growth to all persons desiring such information;

"(6) to evaluate and improve the effectiveness of family planning services programs and of population research;

"(7) to assist in providing trained personnel needed to carry out effectively family planning services programs and population research; and

"(8) to establish and maintain an office of Population Affairs in the Department of Health, Education, and Welfare as a primary focus within the Federal Government for matters pertaining to family planning services and population research, through which the Secretary of Health, Education, and Welfare shall carry out the purposes of this part.

"OFFICE OF POPULATION AFFAIRS AND DEPUTY ASSISTANT SECRETARY FOR POPULATION AFFAIRS

"SEC. 1001. (a)(1) There is established within the Department of Health, Education, and Welfare an Office of Population Affairs under the direction of a Deputy Assistant Secretary for Population Affairs, who shall be appointed by the Secretary, shall be subject to the direct supervision of the Assistant Secretary for Health, and shall be assigned no substantial functions or responsibilities not specified in this

part or determined by such Assistant Secretary to be necessary to carry out the purposes of this part.

"(2) The Office of Population Affairs shall be headed by a Director who shall be subject to the direct supervision of the Deputy Assistant Secretary for Population Affairs appointed under paragraph (1) of this subsection. The Secretary shall provide the Office of Population Affairs with such full-time professional and clerical staff and with the services of such consultants and of such management and supporting staff as may be necessary for it to carry out effectively its functions under this part.

"(b) The Secretary shall utilize the Deputy Assistant Secretary for Population Affairs—

"(1) to administer, directly through the Office of Population Affairs, all Federal laws for which the Secretary has administrative responsibility and which provide for or authorize the making of grants or contracts related to family planning programs;

"(2) to be responsible for general supervision of and overall policy formulation with respect to all population and family planning research carried on or supported by the Department of Health, Education, and Welfare pursuant to this part;

"(3) to provide for the coordinated operation of clearinghouse activities for information pertaining to

domestic and international family planning programs and population research for use by all interested persons and public and private entities;

"(4) to coordinate the support of training carried out within the Department of Health, Education, and Welfare for necessary personnel for domestic family planning programs, and for family planning and population research activities;

"(5)(A) to coordinate and, through the Office of Population Affairs, be responsible for the evaluation of the other Department of Health, Education, and Welfare programs (including activities relating to the development and dissemination of information and educational materials) related to family planning (including advising the Secretary and the Assistant Secretary for Health on the adequacy of the data systems with respect to family planning activities in such programs) and population research, and to make periodic recommendations to the Secretary regarding such programs and systems; (B) to consult with the Commissioner of the Food and Drug Administration on all matters related to the evaluation and regulation of drugs and devices to assist in fertility management; and (C) to advise the Secretary regarding appropriate relationships between projects and activities supported under this part

and other health care programs administered by the Department and the extent to which such programs are carried out consistent with the purposes of this part; and

"(6) to provide a liaison with the activities carried on by other agencies and instrumentalities of the Federal Government relating to family planning programs and population research.

The Administration of certain laws required in clause (1) of this subsection to be carried out directly by the Deputy Assistant Secretary for Population Affairs may be exercised through a delegation of authority personally made by the person serving as such Deputy Assistant Secretary to an employee of the Department of Health, Education, and Welfare not operating in the Office of Population Affairs who is subject to the direct supervision of such Deputy Assistant Secretary. No such delegation of authority shall be effective unless, not less than thirty days before it is proposed to take effect, it has been published in the Federal Register and a copy transmitted to the Committee on Human Resources of the Senate and the Committee on Interstate and Foreign Commerce of the House of Representatives.

"GRANTS AND CONTRACTS FOR FAMILY PLANNING SERVICES PROJECTS

"SEC. 1002. (a) The Secretary is authorized to make grants to and enter into contracts with public or nonprofit private entities to assist in one or more of the following activities: (1) the establishment, maintenance, and expansion of voluntary family planning projects which shall offer a broad range of acceptable and effective family planning methods (including natural family planning methods) to persons of all ages who need and desire them; (2) the provision through such voluntary family planning projects of comprehensive services appropriate to the needs of sexually active adolescents who need and desire such services in order to avoid unwanted pregnancies; and (3) the establishment and operation of demonstration projects aimed at alleviating problems of infertility through the provision of necessary services to persons who need and desire them.

"(b) In making grants and contracts under this section, the Secretary shall take into account the number and characteristics of patients to be served, the extent to which family planning services are needed locally, the relative need of the applicant, and its capacity to make rapid and effec-

tive use of such assistance. Local and regional entities shall be assured the right to apply for direct grants and contracts under this section, and the Secretary shall by regulation fully provide for and protect such rights.

"(c) For the purpose of making grants and contracts under this section, there are authorized to be appropriated $30,000,000 for the fiscal year ending June 30, 1971; $60,000,000 for the fiscal year ending June 30, 1972; $111,500,000 for the fiscal year ending June 30, 1973; $111,500,000 each for the fiscal years ending June 30, 1974, and June 30, 1975; $115,000,000 each for fiscal years 1976 and 1977; and $136,400,000 for fiscal year 1978.

"(d)(1) For the purpose of making grants and contracts under subsection (a)(1), there are authorized to be appropriated $169,000,000 for fiscal year 1979; $197,000,000 for fiscal year 1980; $228,000,000 for fiscal year 1981; $263,000,000 for fiscal year 1982; and $300,000,000 for fiscal year 1983.

"(2) For the purpose of making grants and contracts for the purposes of subsection (a)(2), there are authorized to be appropriated $42,500,000 for fiscal year 1979; $72,000,000 for fiscal year 1980; $105,000,000 for fiscal year 1981; $142,000,000 for fiscal year 1982; and $183,000,000 for fiscal year 1983.

"(3) For the purpose of making grants and contracts

under subsection (a)(3), there are authorized to be appropriated $5,000,000 for fiscal year 1979; $7,500,000 for fiscal year 1980; $10,000,000 for fiscal year 1981; $12,500,000 for fiscal year 1982; and $15,000,000 for fiscal year 1983.

"TRAINING GRANTS AND CONTRACTS

"SEC. 1003. (a) The Secretary is authorized to make grants to public or nonprofit private entities and to enter into contracts with public or private entities and individuals to provide training for personnel to carry out family planning services programs described in section 1002, including training in the provision of natural family planning methods.

"(b) For the purpose of making grants and contracts under this section, there are authorized to be appropriated $2,000,000 for the fiscal year ending June 30, 1971; $3,000,000 for the fiscal year ending June 30, 1972; $4,000,000 for the fiscal year ending June 30, 1973; $3,000,000 each for the fiscal years ending June 30, 1974, and June 30, 1975; $4,000,000 for fiscal year 1976; $5,000,000 for fiscal year 1977; $3,000,000 for fiscal year 1978; $4,000,000 for fiscal year 1979; $5,000,000 for fiscal year 1980; $5,500,000 for fiscal year 1981; $6,000,000 for fiscal year 1982; and $6,500,000 for fiscal year 1983.

"RESEARCH

"SEC. 1004. (a) The Secretary is authorized to—

"(1) conduct, and

"(2) make grants to public or nonprofit private entities and enter into contracts with public or private entities and individuals for projects for,

research in the biomedical, contraceptive development, behavioral, and program implementation fields related to family planning and population, including infertility and natural family planning methods and methods for use by males and adolescents.

"(b) When the Secretary determines that it would serve the purposes of this part, the Secretary shall, in accordance with regulations which the Secretary shall prescribe, provide recipients of grants or contracts for contraceptive development with appropriate exclusive development and marketing rights.

"(c)(1) To carry out subsection (a), there are authorized to be appropriated $30,000,000 for the fiscal year ending June 30, 1971; $50,000,000 for the fiscal year ending June 30, 1972; $65,000,000 for the fiscal year ending June 30, 1973; $2,615,000 each for the fiscal years ending June 30, 1974, and June 30, 1975; $55,000,000 for fiscal year 1976; $60,000,000 for fiscal year 1977; $68,500,000 for fiscal year 1978; $100,000,000 for fiscal year

1979; $125,000,000 for fiscal year 1980; $150,000,000 for fiscal year 1981; $175,000,000 for fiscal year 1982; and $200,000,000 for fiscal year 1983.

"(2) No funds appropriated under any provision of this Act (other than this subsection) may be used to conduct or support the research described in subsection (a) or for the administration of this section.

"(d) The Secretary shall ensure that research priorities and policies under this section shall (1) be established by, and research activities pursuant thereto shall be carried out under the general supervision of, the Deputy Assistant Secretary for Population Affairs appointed under section 1001(a)(1), and (2), with respect to the development and evaluation of contraceptive methods, be established after consultation with the Commissioner of the Food and Drug Administration.

"INFORMATION AND EDUCATIONAL MATERIALS

"SEC. 1005. (a) The Secretary is authorized to make grants to public or nonprofit private entities and to enter into contracts with public or private entities and individuals to assist in developing and making available family planning and population growth information and educational materials to all persons desiring such information or materials (including information or materials regarding natural family planning methods), with special emphasis on the development by and dissemination through appropriate com-

munity organizations of information and materials for adolescents.

"(b) For the purpose of making grants and contracts under this section, there are authorized to be appropriated $750,000 for the fiscal year ending June 30, 1971; $1,000,000 for the fiscal year ending June 30, 1972; $1,250,000 for the fiscal year ending June 30, 1973; $909,000 each for the fiscal years ending June 30, 1974, and June 30, 1975; $2,000,000 for fiscal year 1976; $2,500,000 for fiscal year 1977; $600,000 for fiscal year 1978; $6,000,000 for fiscal year 1979; $10,000,000 for fiscal year 1980; $12,000,000 for fiscal year 1981; $14,000,000 for fiscal year 1982; and $16,000,000 for fiscal year 1983.

"REGULATIONS AND PAYMENTS

"SEC. 1006. (a) Grants and contracts made under this part shall be made in accordance with such regulations as the Secretary may prescribe. The amount of any grant under any section of this part shall be determined by the Secretary; except that no grant under any such section for any project for a fiscal year beginning after June 30, 1975, shall be made for less than 90 per centum of its costs (as determined under such regulations) unless the grant is to be made for a project for which a grant was made (under the same section) for the fiscal year ending June 30, 1975, for less than 90 per centum of its costs (as so determined), in which case a grant

under such section for such project for a fiscal year beginning after such date may be made for a percentage which shall not be less than the percentage of its costs for which the fiscal year 1975 grant was made.

"(b) Grants under this part shall be payable in such installments and subject to such conditions as the Secretary may determine to be appropriate to assure that such grants will be effectively utilized for the purposes for which made.

"(c) A grant may be made or contract entered into under section 1002 for a family planning services project only upon assurances satisfactory to the Secretary that—

"(1) priority will be given in such project to the furnishing of family planning services to persons from low-income families and persons with difficulty in securing access to such services;

"(2) no charge will be made in such project for family planning services provided to any person from a low-income family except to the extent that payment will be made by a third party (including a government agency) which is authorized or is under legal obligation to pay such charge;

"(3) unemancipated minors requesting family planning services from such project will be encouraged, whenever feasible, to consult with their parents with respect to such services;

"(4) family planning services will be available to both sexes in such project;

"(5) reports will be submitted by such project to the Secretary in such form, at such times, and containing such information as the Secretary may reasonably require, including an annual report, in accordance with uniform criteria, of the number and characteristics of persons served in such project; and

"(6) in the case of a project which serves a population including a substantial proportion of individuals of limited English proficiency, the project has (A) developed a plan and made arrangements responsive to the needs of such population for providing services to the extent practicable in the language and cultural context most appropriate to such individuals, and (B) identified an individual on its staff who is fluent in both such language and in English and whose responsibilities shall include providing guidance to such individuals and to appropriate staff members with respect to cultural sensitivities and bridging linguistic and cultural differences.

For purposes of this subsection, the term 'low-income family' shall be defined by the Secretary in accordance with such criteria as the Secretary may prescribe in regulations so as to insure that economic status shall not be a deterrent to participation in projects assisted under this part.

"(d) The Secretary shall seek to make equitable dis-

tribution of funds appropriated under this part among the various regions of the country and to ensure that the needs of rural and urban areas are appropriately addressed.

"VOLUNTARY PARTICIPATION

"SEC. 1007. (a) The acceptance by any individual of family planning services or family planning or population growth information or educational materials provided through financial assistance under this part (whether by grant or contract) shall be voluntary and shall not be a prerequisite to eligibility for or receipt of any other service or assistance from, or to participation in, any other program of the entity or individual that provided such service, information, or materials.

"(b) In connection with any grant or contract made under this part, the Secretary shall not require any individual employed by a recipient of such grant or contract, nor terminate, suspend, or reduce assistance under this part for such individual's failure, to advise regarding, refer patients for, or provide, abortion or sterilization procedures when such activity would be contrary to the religious beliefs or moral convictions of such individual.

"PROHIBITION OF ABORTION

"SEC. 1008. None of the funds appropriated under this part shall be used in programs where abortion is a method of family planning.

"PLANS AND REPORTS

"Sec. 1009. (a) Not later than four months after the close of each fiscal year, the Secretary shall make a report to the Congress setting forth a plan to be carried out over the next five fiscal years for the—

"(1) extension of family planning services to all persons desiring such services, with particular emphasis on those who cannot afford such services, adolescents, and others who lack access to such services and including persons residing in rural and urban areas;

"(2) development of family planning programs and population research activities, including appropriate emphasis on natural family planning methods;

"(3) training of necessary personnel for the programs authorized by this part and other Federal laws for which the Secretary has responsibility and which pertain to family planning and population research;

"(4) financing of such services and programs;

"(5) evaluation of the efficiency and effectiveness of such services and programs; and

"(6) carrying out of the other purposes and provisions of this part.

"(b) Such a plan shall, at a minimum, indicate on a phased basis—

"(1) the number of individuals (especially those who lack access to such services and including persons residing in rural and urban areas) to be served by family planning programs under this part and other Federal laws for which the Secretary has responsibility, as well as the social and demographic characteristics (including age and sex) of these individuals and the locations and types of agencies and projects providing such services; and the means by which such services and programs are to be financed;

"(2) the types of family planning and population growth information and educational materials to be developed under this part and such other laws and how such information and materials will be made available;

"(3) the research goals to be reached under this part and other Federal laws for which the Secretary has responsibility and which pertain to family planning and population research;

"(4) the personnel to be trained under this part and such other laws;

"(5) an estimate of the costs and personnel requirements needed to carry out the plan under the provisions of this part and such other laws; and

"(6) the means and criteria by which such services

and programs are to be evaluated, and the steps to be taken to maintain a systematic reporting system capable of yielding comparable, comprehensive data (including data on use of natural family planning methods).

"(c) Each report submitted under subsection (a) of this section shall—

"(1) compare results estimated to be achieved during the preceding fiscal year and achieved during the year preceding such year (including estimates for services in rural and urban areas) with the objectives established for each such year under the plan contained in the previous such reports;

"(2) indicate steps being and to be taken to achieve the objectives during the fiscal years covered by the plan (including objectives for services in rural and urban areas) contained in such report and any revisions to plans in previous reports necessary to meet such objectives;

"(3) indicate any projected changes in the data gathering system; and

"(4) make other recommendations with respect to any additional legislative or administrative action necessary or desirable in order to carry out more effectively the purposes and provisions of this part.

"PART B—SUDDEN INFANT DEATH SYNDROME PROGRAMS

"SUDDEN INFANT DEATH SYNDROME COUNSELING, INFORMATION, EDUCATIONAL, AND STATISTICAL PROGRAMS

"SEC. 1011. (a)(1) The Secretary, through an identifiable administrative unit under the supervision of the Assistant Secretary for Health, shall carry out a program to develop public information and professional educational materials relating to sudden infant death syndrome, and to disseminate such information and materials to persons providing health care, to public safety officials, and to the general public. The Secretary shall administer, through such unit, the functions assigned in this section and section 1012, and shall provide such unit with such full-time professional and clerical staff and with the services of such consultants and of such management and supporting staff as may be necessary for it to carry out such functions effectively.

"(2) The Secretary shall—

"(A) develop and implement a system for the periodic reporting to the Department, and dissemination by the Department, of information collected under grants

and contracts made under subsection (b)(1) of this section; and

"(B) carry out coordinated clearinghouse activities on sudden infant death syndrome, including the collection and dissemination to the public, health and educational institutions, professional organizations, sudden infant death syndrome parent self-help organizations, and other interested parties of information pertaining to sudden infant death syndrome and related issues such as death investigation systems, personnel training, biomedical research activities, and information on the utilization and availability of treatment or prevention procedures and techniques, such as home monitors.

The Secretary is authorized to enter into contracts with public or private entities to carry out the information and clearinghouse activities required under this subsection.

"(b)(1) The Secretary is authorized to make grants to public or nonprofit private entities, and enter into contracts with public or private entities, for projects which include both—

"(A) the collection, analysis, and furnishing of information (derived from post mortem examinations and other means) relating to the causes and other appropriate aspects of sudden infant death syndrome; and

"(B) the provision of information and counseling to families affected by sudden infant death syndrome.

"(2) No grant may be made or contract entered into under this subsection unless an application therefor has been submitted to and approved by the Secretary. Such application shall be in such form, submitted in such manner, and contain such information as the Secretary shall, by regulation, prescribe. Each application shall—

"(A) provide that the project for which assistance under this subsection is sought will be administered by or under the supervision of the applicant;

"(B) provide for appropriate community representation (including appropriate involvement of parent self-help groups) in the development and operation of such project;

"(C) set forth such fiscal controls and fund accounting procedures as may be necessary to assure proper disbursement of and accounting for Federal funds paid to the applicant under this subsection; and

"(D) provide for making such reports in such form, at such times, and containing such information as the Secretary may reasonably require, including such reports as will assist in carrying out the provisions of subsection (a)(2) of this section.

"(3) Payments under grants under this subsection may be made in advance or by way of reimbursement, and at such intervals and on such conditions, as the Secretary finds necessary.

"(4) Contracts under this subsection may be entered into without regard to sections 3648 through 3709 of the Revised Statutes (31 U.S.C. 529; 41 U.S.C. 5).

"(5) The Secretary shall seek to make equitable distribution of funds appropriated under this part among the various regions of the country and to ensure that the needs of rural and urban areas are appropriately addressed.

"(6) For the purpose of making grants and contracts under this section, there are authorized to be appropriated $2,000,000 for the fiscal year ending June 30, 1975; $3,000,000 for the fiscal year ending June 30, 1976; $4,000,000 for fiscal year 1977; $3,650,000 for fiscal year 1978; $7,000,000 for fiscal year 1979; $9,000,000 for fiscal year 1980; and $11,000,000 for fiscal year 1981 and each of the two succeeding fiscal years.

"PLANS AND REPORTS

"Sec. 1012. (a) Not later than February 1 of each year after 1978, the Secretary shall submit to the Committee on Human Resources of the Senate and the Committee on Interstate and Foreign Commerce of the House of Representatives a comprehensive report on the administration of this part

(including funds and positions allocated for personnel) and the results obtained from activities thereunder, including the extent of allocations made to rural and urban areas. The report submitted on or before February 1, 1979, shall also set forth a plan to—

"(1) extend counseling and information projects to the fifty States and the District of Columbia by July 1, 1979; and

"(2) extend counseling and information projects to all possessions and territories of the United States by July 1, 1980.

"(b) The Secretary shall conduct or provide for the conduct of a study on State laws, practices, and systems relating to death investigation and their impact on sudden and unexplained infant deaths, and any appropriate means for improving the quality, frequency, and uniformity of the post mortem examinations performed under such laws, practices, and systems in the case of sudden and unexplained infant deaths. Not later than December 31, 1979, the Secretary shall report to the Congress the results of such study, including recommendations as to any appropriate actions by the Department of Health, Education, and Welfare with respect to the conduct of post mortem investigations in all cases of sudden and unexplained infant death (including the desirability and feasibility of establishing pilot projects for cen-

tralized post mortem and specimen examination systems on a statewide or regional basis).

"SUDDEN INFANT DEATH SYNDROME RESEARCH AND RESEARCH REPORTS

"SEC. 1013. (a) From the sums appropriated to the National Institute of Child Health and Human Development under section 441, the Secretary shall assure that there are applied to research of the type described in paragraph (1) (A), (B), and (C) of subsection (b) of this section such amounts each year as will be adequate, given the leads and findings then available from such research, in order to make maximum feasible progress toward identification of infants at risk of sudden infant death syndrome and prevention of sudden infant death syndrome.

"(b)(1) Not later than ninety days after the close of fiscal year 1978 and of each fiscal year thereafter, the Secretary shall report to the Committees on Appropriations of the Senate and the House of Representatives, the Committee on Human Resources of the Senate, and the Committee on Interstate and Foreign Commerce of the House of Representatives specific information for such fiscal year on—

"(A) the (i) number of applications approved by the Secretary in the fiscal year reported on for grants and contracts under this Act for research which relates specifically to sudden infant death syndrome, (ii) total

amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds;

"(B) the (i) number of applications approved by the Secretary in such fiscal year for grants and contracts under this Act for research which relates generally to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds; and

"(C) the (i) number of applications approved by the Secretary in such fiscal year for grants and contracts under this Act for high-risk pregnancy and high-risk infancy research which relates to sudden infant death syndrome, specifying how these conditions relate to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds.

"(2) Each report submitted under paragraph (1) of this subsection shall—

"(A) contain a summary of the findings of intramural and extramural research supported by the National Institute of Child Health and Human Development relating to sudden infant death syndrome as

described in clauses (A), (B), and (C) of such paragraph (1), and the plan of such Institute for taking maximum advantage of such research leads and findings;

"(B) provide information on activities underway and plans to bring about the appropriate clinical application of current research findings and the cost and implications of such applications; and

"(C) provide an estimate of the need for additional funds over each of the next five fiscal years for grants and contracts under this Act for research activities described in such clauses.

"(c) Within five days after the Budget is transmitted by the President to the Congress for each fiscal year after fiscal year 1979, the Secretary shall transmit to the Committees on Appropriations of the Senate and the House of Representatives, the Committee on Human Resources of the Senate, and the Committee on Interstate and Foreign Commerce of the House of Representatives an estimate of the amounts requested for the National Institute of Child Health and Human Development and any other Institutes of the National Institutes of Health, respectively, for research relating to sudden infant death syndrome as described in paragraph (1) (A), (B), and (C) of subsection (b) of this section,

and a comparison of such amounts with the amounts requested for the preceding fiscal year.".

SEC. 3. (a) The title of title XI of the Public Health Service Act is amended to read "GENETIC DISEASES AND HEMOPHILIA PROGRAMS".

(b) Part B of title XI of such Act and sections 1, 2, 3, and 4 of Public Law 91-572 are repealed and part C of such title XI is redesignated as part B on the effective date of this Act.

SEC. 4. This Act shall take effect on October 1, 1978.

Amend the title so as to read: "A bill to amend title X and part B of title XI of the Public Health Service Act to extend appropriations authorizations for five fiscal years for voluntary family planning and population research programs and for sudden infant death syndrome programs, and to make improvements in the provisions governing such programs and research with respect to such syndrome; and for other purposes.".

[Excerpts from Senate Report No. 95-822]

Calendar No. 753

95TH CONGRESS } SENATE { REPORT
2d Session } { No. 95-822

VOLUNTARY FAMILY PLANNING SERVICES, POPULATION RESEARCH, AND SUDDEN INFANT DEATH SYNDROME AMENDMENTS OF 1978

MAY 15 (legislative day, APRIL 24), 1978.—Ordered to be printed

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Mr. CRANSTON, from the Committee on Human Resources, submitted the following

REPORT

[To accompany S. 2522]

The Committee on Human Resources, to which was referred the bill (S. 2522) to amend title X of the Public Health Service Act to extend appropriations authorizations for five fiscal years, having considered the same, reports favorably thereon with an amendment n the nature of a committee substitute, and an amendment to the title, and recommends that the bill, as amended, do pass.

COMMITTEE AMENDMENTS

SUMMARY OF SUBSTANTIVE CHANGES

The committee made a number of substantive amendments to existing law. As included in the committee bill, they are as follows:

A. Voluntary Family Planning and Population Research Programs

* * * * * * *

B. Sudden Infant Death Syndrome

(1) *Restructuring of title X of the Public Health Service Act.*—The committee bill would repeal part B (Sudden Infant Death Syndrome) of title XI of the Public Health Service Act, and add those provisions (as modified) to a revised title X, Family Planning and Human Development Programs, which would include a part A, Voluntary Family Planning and Population Research Programs, and a part B, Sudden Infant Death Syndrome Programs.

(2) *Identifiable administrative unit (sec. 1011(a)(1)).*—This subsection would require that an administrative unit within the Department of Health, Education, and Welfare be identified by the Secretary to carry out the Sudden Infant Death Syndrome program in a coordinated and cohesive fashion, and would require the Secretary to provide the unit with adequate staff to carry out the SIDS program effectively.

(3) *Reporting system and clearinghouse activities (sec. 1011(a)(2)).*—This subsection would require the Secretary to develop a system for the annual reporting of data collected by the counseling and information projects to the Department and to carry out coordinated clearinghouse activities with the various entities within and outside the Department regarding SIDS in order to improve the dissemination of information to individuals and organizations interested in SIDS.

(4) *Counseling and information projects (sec. 1011(b)).*—This section is amended to provide that the information to be collected by the counseling and information projects under section 1011(b)(1)(A) could include not only data on the causes of SIDS, but other aspects of SIDS as well; to require grant applications for information and counseling projects under section 1011(b)(2)(B) to provide for the involvement of appropriate parent self-help groups in the development and operation of such projects; and to direct the Secretary to seek an equitable distribution of appropriated funds among the HEW regions and to ensure that the needs of rural and urban areas are appropriately addressed.

(5) *Authorizations of appropriations (sec. 1011(b)(6)).*—This provision extends and expands for 5 fiscal years the authorizations of appropriations for SIDS programs to allow for continued project expansion and improvement with eventual transition to a community-supported program.

(6) *Reporting requirements (sec. 1012(a)).*—A new section 1012(a) would extend the annual reporting requirements regarding research activities carried out through the National Institute of Child Health and Human Development; would require an annual report concerning the activities of the counseling and information projects administered by HEW; and would require a plan for expansion of counseling and information to all States not later than July 1, 1979, and to all territories and possessions of the United States by July 1, 1980, as part of the annual report on information and counseling programs due on or before February 1, 1979.

(7) *Study (sec. 1012(b))*.—This section would require the Secretary to conduct a study regarding the death investigation laws and systems in the various States and the impact these laws and systems have on sudden and unexplained infant death.

(8) *Research (sec. 1013(a))*.—A new section 1013(a) would require the Secretary to provide assurances that adequate funding is made available for NICHD research activities in the area of SIDS.

(9) *Research reports (sec. 1013(b))*.—This new subsection would require, in addition to research specifically related to SIDS and research generally related to SIDS, that the Secretary provide information on research activities in the area of high-risk pregnancy and high-risk infancy relating to SIDS and that the annual research report include summaries of research findings, their possible clinical applicability, and the costs and implication of such application.

TEXT OF S. 2522 AS REPORTED

The text of the committee substitute amendment is as follows: Strike out all after the enacting clause as follows:

[That this Act may be cited as the "Family Planning Services and Population Research Act Extension of 1978".

[Sec. 2. Title X of the Public Health Service Act (42 U.S.C. 300 et seq.) is amended by striking out in sections 1001(c), 1003(b), and 1005(b) "and" after "1977;" and in section 1004(b)(1) "and" after "1977" and inserting in each place before the period a semicolon and "and such sums as may be necessary for each of the next five fiscal years".]

and insert in lieu thereof the following:

That this Act may be cited as the "Voluntary Family Planning Services, Population Research, and Sudden Infant Death Syndrome Amendments of 1978".

Sec. 2. Title X of the Public Health Service Act (42 U.S.C. 300 et seq.) is amended to read as follows:

"TITLE X—FAMILY PLANNING AND HUMAN DEVELOPMENT PROGRAMS

"Part A—Voluntary Family Planning and Population Research Programs

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"Part B—Sudden Infant Death Syndrome Programs

"SUDDEN INFANT DEATH SYNDROME COUNSELING, INFORMATION, EDUCATIONAL, AND STATISTICAL PROGRAMS

"Sec. 1011.(a)(1) The Secretary, through an identifiable administrative unit under the supervision of the Assistant Secretary for Health, shall carry out a program to develop public information and professional educational materials relating to sudden infant death syndrome, and to disseminate such information and materils to persons providing health care, to public safety officials, and to the general public. The Secretary shall administer, through such unit, the functions assigned in this section and section 1012, and shall provide such unit with such full-time professional and clerical staff and with the services of such consultants and of such management and supporting staff as may be necessary for it to carry out such functions effectively.

"(2) The Secretary shall—

"(A) develop and implement a system for the periodic reporting to the Department, and dissemination by the Department, of information collected under grants and contracts made under subsection (b)(1) of this section; and

"(B) carry out coordinated clearinghouse activities on sudden infant death syndrome, including the collection and dissemination to the public, health and educational institutions, professional organizations, sudden infant death syndrome parent self-help organizations, and other interested parties of information pertaining to sudden infant death syndrome and related issues such as death investigation systems, personnel training, biomedical research activities, and information on the utilization and availability of treatment or prevention procedures and techniques, such as home monitors.

The Secretary is authorized to enter into contracts with public or private entities to carry out the information and clearinghouse activities under this subsection.

"(b)(1) The Secretary is authorized to make grants to public or nonprofit private entities, and enter into contracts with public or private entities, for projects which include both—

"(A) the collection, analysis, and furnishing of information (derived from post mortem examinations and other means) relating to the causes and other appropriate aspects of sudden infant death syndrome; and

"(B) the provision of information and counseling to families affected by sudden infant death syndrome.

"(2) No grant may be made or contract entered into under this subsection unless an application therefor has been submitted to and approved by the Secretary. Such application shall be in such form, submitted in such manner, and contain such information as the Secretary shall, by regulation, prescribe. Each application shall—

"(A) provide that the project for which assistance under this subsection is sought will be administered by or under the supervision of the applicant;

"(B) provide for appropriate community representation (including appropriate involvement of parent self-help groups) in the development and operation of such project;

"(C) set forth such fiscal controls and fund accounting procedures as may be necessary to assure proper disbursement of and accounting for Federal funds paid to the applicant under this subsection; and

"(D) provide for making such reports in such form, at such times, and containing such information as the Secretary may reasonably require, including such reports as will assist in carrying out the provisions of subsection (a)(2) of this section.

"(3) Payments under grants under this subsection may be made in advance or by way of reimbursement, and at such intervals and on such conditions, as the Secretary finds necessary.

"(4) Contracts under this subsection may be entered into without regard to sections 3648 through 3709 of the Revised Statutes (31 U.S.C. 529; 41 U.S.C. 5).

"(5) The Secretary shall seek to make equitable distribution of funds appropriated under this part among the various regions of the country and to endure that the needs of rural and urban areas are appropriately addressed.

"(6) For the purpose of making grants and contracts under this section, there are authorized to be appropriated $2,000,000 for the fiscal year ending June 30, 1975; $3,000,000 for the fiscal year ending June 30, 1976; $4,000,000 for fiscal year 1977; $3,650,000 for fiscal year 1978; $7,000,000 for fiscal year 1979; $9,000,000 for fiscal year 1980; and $11,000,000 for fiscal year 1981 and each of the two succeeding fiscal years.

"PLANS AND REPORTS

"SEC. 1012. (a) Not later than February 1 of each year after 1978, the Secretary shall submit to the Committee on Human Resources of the Senate and the Committee on Interstate and Foreign Commerce of the House of Representatives a comprehensive report on the administration of this part (including funds and positions allocated for personnel) and the results obtained from activities thereunder, including the extent of allocations made to rural and urban areas, The report submitted on or before February 1, 1979, shall also set forth a plan to—

"(1) extend counseling and information projects to the fifty States and the District of Columbia by July 1. 1979; and

"(2) extend counseling and information projects to all possessions and territories of the United States by July 1, 1980.

"(b) The Secretary shall conduct or provide for the conduct of a study on State laws, practices, and systems relating to death investigation and their impact on sudden and unexplained infant deaths, and any appropriate means for improving the quality, frequency, and uniformity of the post mortem examinations performed under such laws, practices, and systems in the case of sudden and unexplained infant deaths. Not later than December 31, 1979, the Secretary shall report to the Congress the results of such study, including recommendations as to any appropriate actions by the Department of Health, Education, and Welfare with respect to the conduct of post mortem investigations in all cases of sudden and unexplained infant death (including the desirability and feasibility of establishing pilot projects for centralized post mortem and specimen examination systems on a statewide or regional basis).

"SUDDEN INFANT DEATH SYNDROME RESEARCH AND RESEARCH REPORTS

"SEC. 1013. (a) From the sums appropriated to the National Institute of Child Health and Human Development under section 441, the Secretary shall assure that there are applied to research of the type described in paragraph (1) (A), (B), and (C) of subsection (b) of this section such amounts each year as will be adequate, given the leads and findings then available from such research, in order to make maximum feasible progress toward identification of infants at risk of sudden infant death syndrome and prevention of sudden infant death syndrome.

"(b)(1) Not later than ninety days after the close of fiscal year 1978 and of each fiscal year thereafter, the Secretary shall report to the Committees on Appropriations of the Senate and the House of Representatives, the Committee on Human Resources of the Senate, and the Committee on Interstate and Foreign Commerce of the House of Representatives specific information for such fiscal year on—

"(A) the (i) number of applications approved by the Secretary in the fiscal year reported on for grants and contracts under this Act for research which relates specifically to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds;

"(B) the (i) number of applications approved by the Secretary in such fiscal year for grants and contracts under this Act for research which relates generally to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds; and

"(C) the (i) number of applications approved by the Secretary in such fiscal year for grants and contracts under this Act for high-risk pregnancy and high-risk infancy research which relates to sudden infant death syndrome, specifying how these conditions relate to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such application for which funds were provided in such fiscal year, and (iv) total amount of such funds.

"(2) Each report submitted under paragraph (1) of this subsection shall—

"(A) contain a summary of the findings of intramural and extramural research supported by the National Institute of Child Health and Human Development relating to sudden infant death syndrome as described in clauses (A), (B), and (C) of such paragraph (1), and the plan of such Institute for taking maximum advantage of such research leads and findings;

"(B) provide information on activities underway and plans to bring about the appropriate clinical application of current research findings and the cost and implications of such applications; and

"(C) provide an estimate of the need for additional funds over each of the next five fiscal years for grants and contracts under this Act for research activities described in such clauses.

"(c) Within five days after the Budget is transmitted by the President to the Congress for each fiscal year after fiscal year 1979, the Secretary shall transmit to the Committees on Appropriations of the Senate and the House of Representatives, the Committee on Human Resources of the Senate, and the Committee on Interstate and Foreign Commerce of the House of Representatives an estimate of the amounts requested for the National Institute of Child Health and Human Development and any other Institutes of the National Institutes of Health, respectively, for research relating to sudden infant death syndrome as described in paragraph (1) (A), (B), and (C) of subsection (b) of this section, and a comparison of such amounts with the amounts requested for the preceding fiscal year.".

SEC. 3. (a) The title of title XI of the Public Health Service Act is amended to read "GENETIC DISEASES AND HEMOPHILIA PROGRAMS".

(b) Part of title XI of such Act and sections 1, 2, 3, and 4 of Public Law 91-572 are repealed and part C of such title XI is redesignated as part B on the effective date of this Act.

SEC. 4. This Act shall take effect on October 1, 1978.

Amend the title so as to read:

A bill to amend title X and part B of title XI of the Public Health Service Act to extend appropriations authorizations for five fiscal years for voluntary family planning and population research programs and for sudden infant death syndrome programs, and to make improvements in the provisions governing such programs and research with respect to such syndrome; and for other purposes.

INTRODUCTION

S. 2522, the proposed "Family Planning Services and Population Research Act Extension of 1978", and S. 2523, legislation to extend the Sudden Infant Death Syndrome Act of 1974, were introduced on February 9, 1978, by Senator Alan Cranston. Joining as cosponsors of these bills were Senators Harrison A. Williams, Jr., Jacob K. Javits, and Donald W. Riegle, Jr.

The Subcommittee on Child and Human Development held hearings on these bills on February 24 and March 1, 1978.

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Sudden Infant Death Syndrome

The Sudden Infant Death Syndrome (SIDS) Act (Public Law 93-270) enacted in 1974 and extended in 1977, created a system of counseling and information services for the families of SIDS victims, authorized the dissemination of educational materials on crib death, and called for the establishment within the National Institute of Child Health and Human Development (NICHD) of a program of biomedical research into the causes and prevention of SIDS.

At the March 1 hearing, testimony was received from the Department of Health, Education, and Welfare, the voluntary parent self-help groups, a multidisciplinary panel of service providers, representatives from several of the Federally-funded projects, and research scientists. The testimony summarized the substantial progress made during the last several years by SIDS researchers into the causes—and ultimate prevention—of SIDS through research projects carried out under the act. Identification of various abnormalities in SIDS victims through this research has provided an infromation base which may lead to prevention of these deaths in the very near future. Additionally, the testimony indicated the substantial contributions made by the counseling and information programs in both educating the public and professionals as to the nature of SIDS as well as assisting the families of SIDS victims.

Suggestions made for program improvement included an increase in funding both for the services provided through the Federally-funded counseling and information projects and for the research function carried out through the NICHD; Federal stimulation for the upgrading of the death investigation systems in the United States so that post mortem examinations will be assured in all cases of sudden and unexplained infant death and so that the quality of these examinations will be improved; increased coordination of activities between the Federally-funded projects for information and counseling and the voluntary parent self-help groups; mandatory reporting of information gathered at the project level to the Department; and expansion of counseling and information programs to all the states, territories and possessions of the United States (presently there are 32 projects in 27 states).

On April 6, 1978, the subcommittee reported to the full committee S. 2522 as amended with a committee substitute amendment.

On May 3, 1978, the Committee on Human Resources ordered favorably reported S. 2522 as reported from the subcommittee, incorporating several additional amendments designed to assure that appropriate attention is given to the needs of rural and urban areas of the United States.

The committee notes that a detailed discussion, including substantial interpretive matter outlining the intention underlying particular provisions, is included in the "Section-by-Section Analysis" at the end of this report.

SUMMARY OF S. 2522 AS REPORTED

BASIC PURPOSE

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Sudden Infant Death Syndrome Programs

The basic thrusts of S. 2522 as reported with respect to the Sudden Infant Death Syndrome Program are as follows:

First, to establish within HEW an administrative unit to carry out the SIDS program in a coordinated and cohesive fashion with adequate staff and continuing accountability to the Congress with respect to activities carried out under the present law.

Second, to provide substantially increased authorizations of appropriations for the SIDS program over the next 5 years so as to improve and expand the data collection system, to provide specifically for clearinghouse activities, to provide for the expansion of counseling and information projects to all of the States and possessions and territories of the United States, with appropriate involvement of parent groups in the planning and carrying out of these projects, to improve services in States now being served; and to insure appropriate consideration is given the needs of rural and urban areas.

Third, to continue and improve various reporting requirements regarding the counseling and information projects and SIDS research.

Fourth, to insure that adequate resources are made available within the National Institute of Child Health and Human Development for research into the causes—and ultimate prevention—of this tragic problem.

Fifth, to develop information and seek out possible improvements with respect to the death investigation systems in the States in the area of sudden and unexplained infant deaths.

DISCUSSION

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THE COMMITTEE BILL

Changes in Statutory organization of title X and XI of the Public Health Service Act

S. 2522 as reported would repeal part B (Sudden Infant Death Syndrome) of title XI of the Public Health Service Act, add it to a revised title X, Family Planning and Human Development Programs, which would then include a part A, Voluntary Family Planning and Population Research Programs, and a part B, Sudden Infant Death Syndrome Programs, The reasons for this combination are as follows:

Conbining these programs in one title pulls together two related programs. Research has shown that SIDS has no apparent genetic base so as to jusitfy its inclusion in title XI. Research has also shown that many SIDS infants were born to very young mothers, were of low birth weight, or were born prematurely—all conditions which can be reduced through proper prenatal care.

During hearings held by the Senate Appropriations Committee in April 1977, on SIDS, Dr. Eileen Hasselmeyer, Chief of the Pregnancy and Infancy Branch of the National Institute of Child Health and Human Development testified thet 50 percent or mote of the crib deaths could be prevented or reduced if premature births of prenatal problems were prevented.

Research in sudden infant death syndrome, high-risk pregnancy, and high-risk infancy as well as in population research is carried out at the same NIH Institute—The National Institute of Child Health and Human Development. In addition, the research in the two programs is related in many ways.

Family Planning clinics serve as the primary health source for many women and the clinics counsel women to seek appropriate prenatal care, referring patients to prenatal service, and encouraging them to seek the all important early prenatal care and guidance on good health and nutition habits during pregnancy which can help ensure the delivery of a healthy baby.

A major new initiative in the newly designated part A of title X is a special emphasis on preventing unwanted pregnancies among sexually active adolescents. These young mothers frequently bear low-birth-weight infants, have poor nutritional habits, and have minimum prenatal care, partially due to ineligibility for Medicaid reimbursement for such care and partially due to an unwillingness to admit they are pregnant in the early months. Preventive family planning services can help these women bear children when they want to and when they are prepared to take on the responsibilities of childbearing. Because of these factors, the committee placed in one title two authorities which address special needs of women and children. It is not the committee's intent, however, that these programs be administered as a single entity or program but, rather, that each continue to be administered in a manner which most effectively addresses their separate, individual program needs, approaches, and philosophy.

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SUDDEN INFANT DEATH SYNDROME PROGRAMS

Background

Sudden Infant Death Syndrome (SIDS) claims the lives of an estimated 6,000–7,000 infants annually. These children die suddenly, unexpectedly, and quietly in their cribs, during what has been considered normal sleep. The incidence rate is approximately two per 1,000 live births. It is the leading cause of death between the ages of 1 and 12 months. Of all infant deaths occurring between the first month and first year of life in this country, as much as half can be attributed to SIDS.

The Sudden Infant Death Syndrome Act of 1974 (Public Law 93-270) reflected the initial expression of concern by the committee about the SIDS problem. The committee felt the pressing need for more research into the causes of this disorder and for a program of public and professional education, information, and counseling about SIDS.

At the present time, a total of 32 projects in 27 States are being funded to provide information and counseling services, as well as to carry out data-gathering activities. These projects provide services to a population base of approximately 126 million. Specifically, education and training is provided to those who come in contact with the families of SIDS victims to sensitize them to the special needs of such families. More than 2,000 educational programs have been conducted during the past year. In addition, the projects work towards improved coordination and development of community resources to deal with SIDS cases. They also assist in the development and distribution of SIDS informational and educational materials. These materials include films, TV spot announcements, and brochures.

Until recently only a small number of infants who died suddenly and unexpectedly were autopsied to confirm the cause of death and to learn more about the conditions contributing to the tragic event. In contrast, 17 of the information and counseling projects report an autopsy rate of 80 percent or higher. In 10 projects, 7 of which are statewide, virtually all infants who die suddenly and unexpectedly are autopsied.

Since 1972, the National Institute of Child Health and Human Development has annually increased its research efforts into sudden infant death syndrome resulting in an expanded base of knowledge about this phenomenon. As a result of Institute-supported investigations during these 6 years, it is evident that SIDS babies are not the healthy infants before death they were once believed to be. There is increasing evidence that the syndrome is not caused by a single mechanism acting at one moment in time, as previously believed. Rather, a number of developmental, environmental, and pathologic factors are involved. Under a complex set of circumstances, these interact and rapidly set up a sequence of events producing a sudden, unexpected and unexplained infant death.

Investigators are currently studying the role of many normal and abnormal phenomena in relation to SIDS. In 1977, the Institute began a cooperative case-control study of SIDS. About 600 cases of SIDS, as defined by an autopsy protocol developed for this study, will be investigated. Case-control comparisons for each factor under study will determine the extent of SIDS risk associated with that factor. It is anticipated that as a result of this project it will be possible to identify high-risk infants on the basis of information available at birth and in the period shortly after birth.

An inexpensive prototype respiratory-cardiac electronic monitor for use in the home on high-risk and near-miss infants is under development.

It is expected that the risk factor study will enable identification of SIDS high-risk infants at birth and in the early weeks post-partum. Home monitoring of heart and respiratory regulation during sleep will further delineate risk. It is the current HEW expectation that the combination of risk-factor and monitoring data will make a SIDS prevention program feasible.

THE COMMITTEE BILL

Changes in the Organization of Title X and XI of the Public Health Service Act

As stated in the earlier discussion of the family planning and population research programs provisions, the placement of the family planning and sudden infant death syndrome (SIDS) programs under one title (title X) of the Public Health Service Act does not suggest any intent by the Committee that these two authorities should be administered as one entity or be administered by the same component in HEW.

These two programs are being brought together under title X because sudden infant death syndrome (SIDS) has no apparent genetic base and there is, therefore, no justification for placement of this program in title XI which includes programs for genetic diseases. Secondly, research has shown that many SIDS infants were born to very young mothers, were of low birth weight, or were born prematurely—conditions which can be alleviated to a significant degree through proper prenatal care or virtually eliminated by making voluntary family planning services available to sexually active adolescents, which has been made a major new initiative in the newly designated part A of title X. In addition, research in sudden infant death syndrome, high-risk pregnancy, and high-risk infancy as well as in population research is carried out at the same NIH Institute—the National Institute of Child Health and Human Development.

Indentification of an Administrative Unit

Presently, the Sudden Infant Death Syndrome (SIDS) program is administered by the Office of Maternal and Child Health within the Bureau of Community Health Services of the Health Services Administration. Because of the relatively small size of the SIDS program and its limited funding, there exists a certain amount of fragmentation of personnel within the Bureau in order to provide the needed professional, consultant, and clerical support.

In an attempt to alleviate at least some of the fragmentation resulting from the division of management and support activities among several offices, the committee bill requires that a unit within the Department be identified to administer the SIDS program. The committee intends that this unit be the focal point for the identification and concentration of staff being funded from the SIDS appropriation. (Approximately $198,000 has been set aside from the $3 million appropriation in fiscal year 1978 for program support.) This provision should help the committee better understand how the administrative expenses allocation is being expended and for whom.

In requiring identification of this administrative unit, the Committee is not suggesting that the SIDS program be moved out of the Office of Maternal and Child Health which has been administering it. Retention of this program in this Office would seem to be both rational and sensitive given the apparent relationship of SIDS to prenatal development and the occurrence of this disorder during the first year of life. Continuing the SIDS program in this Office would, in addition, aid in the coordination of prevention and infant-identification activities once findings derived from biomedical research provide the tools for carrying out such activities.

Coupled with this provision is the requirement that adequate staff must be provided to administer the SIDS program. Because there has been no central administrative unit, and because of the variety of needs of the program, there are fragmented staffing patterns within the Department with respect to this program. At the March 1, 1978 SIDS hearing, Mrs. Nancy Lefebrve, President of the International Council for Infant Survival and herself a SIDS mother, stated:

> A commitment to erradicate SIDS and in the interim, to administer humane services of information and support, cannot be effectively administrated by part-time HEW-MCH personnel. Current staffing is inadequate if the tax-payer's money is to be cost effective in a program consistent with the high ideals of Public Law 93–270.

The adequate staffing provision would require that the Secretary provide the identifiable unit with such full-time professional and clerical staff as well as the services of such consultants and management and supporting staff as may be necessary to carry out this program. The committee believes these personnel are particularly important as the Department enters a phase of expansion of services to all the States, territories, and possessions not presently covered. This provision further corresponds with fiscal year 1978 Senate Labor-

HEW Appropriations report (Senate Report 95-283) which states that "six positions are to be clearly identified for the Sudden Infant Death Syndrome program" within the Health Service Administration.

Mandatory Reporting System

Public Law 93-270, as enacted in 1974, required that the Federally-funded projects provide counseling and information services to families affected by SIDS, and collect, analyze and furnish data relating to the causes of SIDS. The committee bill provides an expanded mandate for the type of data collected by requiring that it cover other appropriate aspects of SIDS. The committee is concerned that a uniform reporting system has not been developed for the communication to the Department of material collected at the project level. The committee bill requires that the Secretary develop and implement such a reporting system. Such a mechanism would not only enable the Department to have a more accurate account of project activities, but would provide information by which individual projects could make comparisons of their services and effectiveness. The need for such data was suggested at the March 1 hearing by Ms. Patricia Dorsa, project coordinator of the New Jersey SIDS Project, when she said:

> Reports of statistics to HEW should be mandatory and uniform so that the epidemiological data of each project, when collated nationally, might reveal significant trends and occurrences.

Clearinghouse Activities

One of the most fundamental reasons for the creation of the SIDS legislation was the need to provide information and education regarding SIDS to the public, as well as to the various service providers who came into contact with SIDS parents after the death of the child. At the time the legislation was enacted, little was known about the disorder, there was no method of identifying children at risk and there was no known way to prevent the death of the child. Parents were sometimes arrested for child abuse or even murder because of a lack of understanding by low enforcement officials. Physicians and other members of the health care community knew very little, if anything, about SIDS and could offer very little assistance or support to the bereaved parents. Biomedical research projects directed toward solving the mystery of SIDS were few.

Much has been learned since the enactment of the Sudden Infant Death Syndrome Act of 1974. Numerous epidemiological factors have been identified as peculiar to SIDS infants; medical schools as well as other health professional institutions are beginning to include SIDS in their curricula; the attitudes and understanding of the law enforcement community have vastly improved; the need for counseling of families of SIDS victims is beginning to be understood and is being given increased emphasis; research has revealed that SIDS babies are not the healthy babies they were once thought to be; instead they have been found to have distinctive physiological or anatomical disorders that previously went unnoticed.

With all these advances, however, there still remains much to learn. Research must continue so that the lesions or defects that are common to all SIDS victims can be identified and, once found, this information applied to preventing the syndrome. There needs to be an increased awareness of SIDS on the part of health professionals so that they can improve their services to families who lose their infants to SIDS. These services include counseling to such families, possible monitoring of subsequent siblings, and advising the SIDS families of the value of post mortem examination to ensure an accurate diagnosis. In order to foster increased awareness on the part of physicians-in-training, some SIDS projects are coordinating educational programs with medical schools in their vicinities. Through such coordinated efforts, medical students often have the opportunity to listen to a multi-disciplinary presentation on SIDS given by a pathologist, a pediatrician, a nurse and a SIDS parent. Such cooperative measures between federally funded SIDS information and counseling projects and medical schools must be encouraged, along with efforts to urge medical schools to include SIDS in their basic core curricula.

The committee heard testimony that information and educational materials must be in languages other than English and directed toward the economically disadvantaged population that so often experiences SIDS. The general public as well as service providers must continue to be educated as to the existence of this disorder. Although there has been a great improvement in understanding on the part of lay and professional communities with respect to SIDS, there are still many individuals who need to be reached.

Of basic importance in this informational and educational process, is coordination in the collection and dissemination of data. At the March 1 hearings, Ms. Dorsa also recommended:

> . . . that a stabilized and ongoing system for the dissemination of information be developed so pertinent current information can be rapidly directed to those who need to use it on the grass roots level to insure implementation of current knowledge at the hospital's infant and pediatric units, as well as local pediatrician, family physician and obstetrician offices.

In order to improve the awareness of the public and provide timely information to those who need it regarding the various aspects of SIDS, the committee bill would require the Secretary to carry out coordinated clearinghouse activities. These activities will include the collection, analysis, and dissemination to the public, health, and educational institutions, professional organization, sudden infant death syndrome parent self-help organizations, and other interested parties, of information pertaining to SIDS and related issues such as death investigation systems, personnel training, biomedical research activities, and information on the utilization and availability of treatment or prevention procedures and techniques, such as the advisability surrounding the use of cardiopulmonary home monitors and the conditions and required training associated with the use of such new technology. The committee takes note of the recent position of the

Task Force on Prolonged Apnea of the American Academy of Pediatrics regarding the use of home monitors:

> Electronic or other monitors of the heart or respiratory rate may be useful adjuncts to 24-hour surveillance, but should be used only under medical supervision.

It is committee's intent that, under this new clearinghouse authority, the contract mechanism would be used to engage public and private entities (including for-profit entities) in performing functions associated with the national efforts to develop and disseminate public information and professional education materials and in the collection, analysis, and furnishing of information relating to SIDS and other appropriate activities which relate to SIDS research and information and counseling activities.

The committee notes that in continuing the authority for grants and contracts under new section 1011(b)(1) for public and private entities to carry out information and counseling programs as well as the collection, analysis, and furnishing of information about SIDS, it is anticipated that the funding mechanism for such projects will be grants with public or nonprofit private entities wherever feasible and, where grants are not feasible, then contracts will be used with public or non-profit private entities. It is the committee's view that the collection, analysis, and furnishing of information about SIDS is a necessary part of every information and counseling project. The committee has not authorized carrying out information and counseling projects through contracts with private, for-profit entities.

Involvement of Appropriate Parent Self-Help Organizations

Because the committee recognizes the valuable contributions that may be made to projects by parent self-help organizations, such as the International Council for Infant Survival and the National Sudden Infant Death Syndrome Foundation, as well as other individuals who have experienced the tragedy of SIDS, a provision has been included in the committee bill which states that, where appropriate, parent self-help groups should be included in the development and the operation of Federally-funded counseling and information projects. The provision responds to the March 1 testimony of Mr. Saul Goldberg of the International Council for Infant Survival, who testified as follows:

> It would seem logical that that part of the community that is the people most willing to help and most likely to contribute through their own experiences would be from the very organizations of SIDS parents who initiated the fight against Sudden Infant Death Syndrome and brought it to congressional attention. I speak of the National Sudden Infant Death Syndrome Foundation as well as the Guilds for Infant Survival. Yet the degree of participation in the development and operation of projects varies widely, and in some instances, does not exist by ignoring or bypassing this available resource. It may be given token recognition in ineffective community councils which are merely advisory and do not oversee project operations. Thus the term "appropriate community representation" is not specific enough. I suggest this phrase be changed to spell out SIDS parents groups.

Equitable Distribution of Funds and Needs of Rural and Urban Areas

The committee bill would require that the Secretary of HEW carry out an equitable distribution of funds for SIDS projects among the various regions of the nation, considering carefully the needs of both rural and urban populations so as to insure that every State has an equal opportunity to be considered for SIDS funding support.

The committee recognizes that many factors need to be considered in the awarding of SIDS information and counseling grants, such as the extent of the estimated SIDS problem in a State, the availability of appropriate resources to insure a coordinated, comprehensive, program of services for families with in the State, and the availability of Federal funds. It is the committee's hope that comprehensive SIDS services will be available in all States by July 1, 1979. However, as funds are made available to reach this objective, the committee anticipates that not just the number of estimated SIDS deaths in a State, but these various other factors of need will be considered in determining award priorities.

Expansion and Extension of Authorizations of Appropriations

At the March 1 hearing, Ms. Carolyn Szybist, R.N., Executive Director of the National SIDS Foundation, offered the following recommendation:

> We recommend that Public Law 93-270 be reauthorized for a period of the next 5 years. That the next 3 years of that reauthorization address itself to the maintenance of the good programs, the redevelopment of the less effective programs, and the establishment of programs where none currently exist. With that recommendation comes the mandate for maintenance services for communities not funded as grant projects under the law. We ask that programs be available and maintained for all families, not just some. We recommend that the last 2 years of the 5-year period address itself to the administrative task within HEW of the orderly transition of those programs into whatever mechanism is deemed appropriate for their maintenance.

In addition, Dr. Julius Richmond, Assistant Secretary for Health, testified:

> Eventually we (HEW) hope to implement a nationwide program so that services comparable to those provided in the current projects areas are available for any family affected by a sudden and unexpected infant death.

With the testimony of these and other witnesses in mind, authorizations of appropriations for the new part B would be increased to $7 million for fiscal year 1979, $9 million for fiscal year 1980, and $11 million for fiscal year 1981 and for each of the next 2 fiscal years.

Such an expansion would allow for 3 years of continued project expansion and improvement, and two years of transition to greater reliance on community financing of the information and counseling activities and preparation for possible other means of Federal support. Current funding levels of $2,802,000 provide for the funding of counseling and information projects in only about half the states and territories, serving only about half the population. The substantial increase in the first year would provide funding for the expansion of projects to all States as called for in the committee bill, for some expansion within States, and for the expenses of the studies and reports required under the committee bill.

Project Plans and Reports

The committee bill requires that the Secretary submit to Congress an annual report regarding the activities and administration of the SIDS counseling and information projects. This requirement is an extension of the reporting requirement (for a January 1, 1976 report) which is part of existing law. The committee believes annual reports will serve to keep Congress informed as to (1) the advances in SIDS projects' counseling and informational activities; (2) what the state of the art is with respect to the clinical application of SIDS research activities, including information with respect to followup services that SIDS families or families of high-risk infants might be provided for their children, such as sleep evaluation, physical examination, monitoring, and other forms of physical assessment and treatment; and (3) whether or not projects are moving toward finding community funding sources.

The report due on or before February 1, 1979, also would be required to set forth a plan for extension of counseling and information projects to all States by July 1, 1979, and to all territories and possessions by July 1, 1980. Such expansion will provide services to the approximately 23 States and the 7 territories which are presently without these services.

Study of State Death Investigation Systems

The committee bill requires the Secretary to conduct a study of the death investigation laws and systems in effect within the States, territories, and possessions of the United States, and how these laws and systems impact on sudden and unexplained infant deaths. The report of the study would also focus on any appropriate means for improving such laws and systems.

The diagnosis of sudden infant death syndrome is one of exclusion—only after other disease entities are ruled out is a SIDS diagnosis established. In order to rule out other diseases, disorders, or causes of death, an autopsy must be performed.

Whether or not a post mortem examination is performed is often dependent upon many factors such as the system used (medical examiner or coroner); State laws (which may or may not mandate post mortem examinations in the cases of suddent and unexplained infant death); and the quality of the personnel used both to investigate the death scene and to perform the actual autopsy.

The systems generally used are based on either the coroner or the medical examiner models. The latter utilizes a network of physicians who are usually appointed to their positions by virtue of their expertise in the death investigation area and who are accountable to one central authority within the State—the chief medical examiner—who is generally a forensic pathologist. The coroner system uses individuals who are from varying disciplines (undertakers, physicians, and others) who are generally elected to their positions and usually function autonomously within the State.

In addition to ruling out other disease-entities and establishing the diagnosis of SIDS, the post mortem examination is vital in alleviating the guilt feelings of most SIDS parents. Parents need to be reassured that the diagnosis was indeed SIDS and that there was nothing they could possibly have done to save their baby. Testimony received at the March 1, 1978, hearing indicated that there were a variety of difficulties across the country in obtaining these vital post mortem examinations. In her testimony, Ms. Zoe Smialek, R.N., project coordinator of the Michigan SIDS Information and Counseling Project, described some of the impediments to obtaining autopsies on infants who die suddenly and unexpectedly. These included reports of physicians, even pathologists, recommending against autopsy and making inaccurate statements such as "What good will it do now?" or "You won't be able to have an open casket", and of medical examiners sometimes not informing the parents of the availability of the autopsy under State law.

While efforts are being made under the SIDS program to change the attitudes of the physicians and health care providers who come into contact with families following the death of their infant, a comprehensive analysis of death investigation laws and practices and their impact on sudden and unexplained infant deaths should provide information as to what appropriate action, if any, can be taken to rectify some of these problems. The committee believes that the study required should both look at the practicability of establishing pilot projects for centralized post mortem and specimen examination systems on a statewide or regional basis, as well as examine the benefits and feasibility of a system for achieving the rapid reporting of autopsy results to the parents of infants who have died suddenly and unexpectedly.

Once this study has been completed, the Department should provide a copy of the report submitted to Congress to the appropriate authority within each of the States, territories, and possessions of the United States.

Sudden Infant Death Syndrome Research and Reports

The committee bill would provide for increased emphasis on the all important area of SIDS research and specifies that this includes research specifically related to SIDS, research generally related to SIDS, and research in the area of high-risk pregnancy and high-risk infancy which relates to SIDS.

The committee bill would require that the Secretary assure that adequate sums are allocated from the appropriation to the National Institute of Child Health and Human Development to carry out SIDS research given the leads and findings available from such scientific investigation in order to make maximum feasible progress toward identification and prevention of SIDS.

The annual reports previously required under Public Law 93-270 would be made a permanent requirement of the NICHD, and, in addition, the committee bill would require that information be included in these reports to describe research activities in the area of high-risk pregnancy and high-risk infancy relating to SIDS. Information regarding this additional type of investigation is included to ensure that reports on activities already being funded by NICHD in this area are specifically included, and because it is felt that studying this field will not only provide us with clues as to the cause of SIDS, but will help us to identify infants at risk so that their deaths might be prevented.

The committee bill does not now include a specific dollar authorization for SIDS research which is generally authorized under section 301 of the PHS Act to be appropriated as part of the general appropriation to NICHD, the authority for which includes, in section 441(b) a specific reference to SIDS research. The committee intends to watch carefully the SIDS research program and urge substantially increased funding for it. For fiscal year 1979 the committee recommends an appropriation of $20 million for primary, secondary, and tertiary SIDS research--an increase of about $4 million over the HEW budget request. Should the level of funding of SIDS research not prove satisfactory, the committee will consider what other legislative methods may be necessary to secure the needed level of funding.

In addition to maintaining active support for biomedical investigation, there is a need to increase activities in the area of behavioral research. At the March 1 hearing, Dr. Alfred Steinschneider, professor in the Department of Pediatrics at the University of Maryland School of Medicine, testified:

> Unfortunately relatively little scientific progress has been made in our understanding of the psychological and biological consequences of a SIDS death on the surviving parents and siblings. I am aware of very few research studies which have focused directly on this very important problem area. The improvement of helping services to family survivors will require the accumulation of a considerably increased amount of objective data. Furthermore, research studies will have to be initiated and adequate funds made available to assess the effectiveness of proposed psychologically oriented intervention programs.

The need for such research was further suggested in the following testimony of Dr. Albert C. Cain, Professor in the Department of Psychology at the University of Michigan:

> As a private citizen, clinician, and behavioral scientist, I urge that you look unblinkingly at the nightmare of this unique human tragedy and its enduring effects, weigh carefully the human misery and social costs involved on your scale of values and priorities. I hope and trust that you will then not only extend the authorities of the legislative Act under consideration, but increase the funding authorized and broaden its mandate to include study of the behavorial aspects of SIDS losses—with the preventive intent of ultimately diminishing the tragic suffering of these families, and simultaneously accruing knowledge of likely benefit to the still larger number of bereaved families devastated by other forms of infant and child death."

According to testimony presented by Dr. Julius Richmond, Assistant Secretary of Health at this same hearing, one of the objectives of the SIDS research program being carried out by NICHD is "to elucidate the impact of a sudden and unexpected infant death on the parents, siblings and the extended family". The required research report would thus also include summaries of projects and activities being carried out in the area of studying the impact of SIDS on surviving family members.

The research report would also include summaries of findings, their possible clinical applicability, and the cost and implications of such applications. Within a few years, it is expected that information gathered from the research carried on through NICHD will be available for application in the clinical sector. Such information will assist in the identification of infants-at-risk and the prevention of the death of the potential victim. The annual reports on these activities should then assist the projects in disseminating timely information to health professionals and others within the community, and in expanding their focus to include prevention as well as information and counseling.

This reporting provision is designed to allow for thorough examination of new procedures prior to the time they are adopted for general use by the medical community and, thereby to protect against the premature application of "breakthrough technology" and the subsequent waste and danger that might result.

COST ESTIMATE

The committee adopts the following cost estimate from the Congressional Budget Office as its own:[1]

CONGRESSIONAL BUDGET OFFICE—COST ESTIMATE

1. Bill number: S. 2522.
2. Bill title: Voluntary Family Planning Services, Population Research, and Sudden Infant Death Syndrome Amendments of 1978.
3. Bill Status: As ordered reported by the Senate Committee on Human Resources on May 3, 1978.
4. Bill purpose: The purpose of this bill is to authorize appropriations for the following sections of title X, Family Planning and Human Development Programs, of the Public Health Service Act:

1002(e)(1)—Family Planning Projects
1002(e)(2)—Adolescent Services
1002(e)(3)—Infertility Services
1003(b) —Training Grants and Contracts
1004(c) —Research
1005(b) —Information and Educational Materials

In addition, the sudden infant death syndrome programs, which are currently under title XI, are transferred to title X as new sections 1011 through 1013. Authorizations for all sections are for fiscal years 1979–1983.

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[1] The committee notes that the CBO estimates for each year are based on HEW patterns of spending a portion of the appropriations in the first year and the remainder in the following year. In the case of services, HEW spends approximately 42 percent of the appropriation in the first year and 58 percent in the subsequent year. In the case of research programs, HEW spends approximately 38 percent of the funds appropriated in the first year and the remainder in the following year. Funds still available from fiscal year 1978 appropriations, however, are not included in the CBO estimates for fiscal year 1979 since those prior balances are already accounted for in the budget and are not attributable to the Committee bill.

5. Cost estimate:

[Fiscal years, in millions of dollars]

	1979	1980	1981	1982	1983
Authorization level:					
Family planning projects (1002-e-1)	169.0	197.0	228.0	263.0	300.0
Adolescent services (1002-e-2)	45.5	72.0	105.0	142.0	183.0
Infertility services (1002-e-3)	5.0	7.5	10.0	12.5	15.0
Training grants and contracts (1003-b)	4.0	5.0	5.5	6.0	6.5
Research (1004-c)	100.0	125.0	150.0	175.0	200.0
Information and education (1005-b)	6.0	10.0	12.0	14.0	16.0
Sudden infant death (1011-b-5)	7.0	9.0	11.0	11.0	11.0
Total authorization levels	333.5	425.5	521.5	623.5	731.5
Projected costs:					
Family planning projects (1002-e-1)	71.0	141.9	188.5	233.0	267.7
Adolescent services (1002-e-2)	17.9	45.1	75.3	110.2	147.8
Infertility services (100-e-3)	2.1	5.0	7.5	10.3	12.7
Training grants and contracts (1003-b)	1.7	3.5	4.7	5.4	6.0
Research (1004-c)	35.0	106.8	133.2	158.3	183.3
Information and education (1005-b)	2.5	6.3	9.3	12.1	14.2
Sudden infant death (1011-b-5)	2.9	7.8	9.8	11.0	11.0
Total projected costs	133.1	316.4	428.3	540.3	642.7

The costs of this bill fall within budget function 550.

6. Basis for estimate: Outlays are based on specific program spendout rates provided by HEW and updated by CBO. In each case, outlays are calculated assuming that authorizations will be fully appropriated at the beginning of each fiscal year.

7. Estimate comparison: None.

8. Previous CBO estimate. None.

9. Estimate prepared by: John Nelson.

10. Estimate approved by:

C. G. NUCKOLS
(For James L. Blum,
Assistant Director for Budget Analysis).

REGULATORY IMPACT STATEMENT

Pursuant to section 602 of Senate Resolution 4, the following is an evaluation of the anticipated regulatory impact of S. 2522 as reported:

A. ESTIMATED NUMBER OF INDIVIDUALS AND BUSINESSES REGULATED AND THEIR GROUPS OR CLASSIFICATIONS

For the most part, S. 2522 as reported would extend for 5 years the existing Family Planning and Sudden Infant Death Syndrome (SIDS) authorities at higher authorization levels. No new classifications of individuals or businesses in the private sector would become subject to regulation as the result of this legislation. Moreover, the individuals or entities now subject to regulations under the Family Planning and SIDS programs are so covered on a strictly voluntary basis, since the grantees must apply to participate in the program and the recipients of the services provided receive the services on a strictly voluntary basis.

B. ECONOMIC IMPACT ON INDIVIDUALS OR BUSINESSES

The economic impact of these amendments on individuals or businesses is expected to be minimal.

C. IMPACT ON PERSONAL PRIVACY OF INDIVIDUALS

The amendments contained in S. 2522 as reported would make no significant changes in the existing privacy aspects of the Family Planning and SIDS programs.

D. ADDITIONAL PAPERWORK, TIME, AND COSTS

Regulations to be promulgated as the result of S. 2522 would be in the nature of minor modifications to existing regulations.

Several reports to Congress would be mandated under the provisions of S. 2522 as reported:

(1) Annual report on Family Planning program activities;

(2) Annual report on SIDS program activities. The first such report is to include a detailed plan for extending SIDS services to cover the entire Nation and its territories and possessions;

(3) The results of a study to be conducted with regard to the adequacy of State laws and practices related to SIDS activities;

(4) Annual report on the SIDS research activities, including number of grant applications received, approved, etc; and

(5) Annual report on the President's budget request for SIDS research.

TABULATION OF VOTES CAST IN COMMITTEE

Pursuant to section 133(b) of the Legislative Reorganization Act of 1946, as amended, the following is a tabulation of votes cast in Committee:

> Mr. Cranston's motion to approve amendments offered on behalf of Mr. Hathway, stressing the needs of rural and urban areas, was adopted by unanimous voice vote. Mr. Cranston's motion to report the bill as amended was accepted by a unanimous voice vote:

SECTION-BY-SECTION ANALYSIS OF S. 2522 AS REPORTED

Section 1

Provides that the act may be cited as the "Voluntary Family Planning Services, Population Research, and Sudden Infant Death Syndrome Amendments of 1978".

Section 2

Amends title X of the Public Health Service Act, Population Research and Voluntary Family Planning Programs, by changing the title to "Family Planning and Human Development Programs", and by establishing a part A—Voluntary Family Planning end Population Research Programs—and a part B—Sudden Infant Death Syndrome Programs.

NEW PART A—VOLUNTARY FAMILY PLANNING AND POPULATION RESEARCH PROGRAMS

* * * * * * *

PART B—SUDDEN INFANT DEATH SYNDROME PROGRAMS

Sudden Infant Death Syndrome Counseling, Information, Educational, and Statistical Programs

Subsection (a)(1) of new section 1011 requires the Secretary, through an identifiable administrative unit under the supervision of the Assistant Secretary for Health, to carry out a program to develop public information and professional eductional materials relating to sudden infant death syndrome and to disseminate such information and materials to persons providing health care, to public safety officials, and to the general public. This subsection further requires the Secretary to administer, through the identifiable unit, the functions assigned in section 1011 and section 1012, and to provide the unit with such full-time professional and clerical staff and with the services of such consultants and of such management and supporting staff as may be necessary for the unit to carry out its functions effectively.

This provision is designed to increase the accountability of the Department for the administration of the SIDS information and counseling program and to alleviate some of the fragmentation that derives from the division of management and support activities among several offices. Personnel with primary responsibility for the SIDS program would be located in this unit.

New subsection (a)(2)(A) requires the Secretary to develop and implement a system for the periodic reporting to the Department, and dissemination by the Department, of information collected under grants and contracts made under subsection (b)(1) of this section.

The collection of information by grantees and contractors was first provided for in Public Law 93-270; however, a uniform, systematic reporting mechanism has never been established. This provision would require the development of such a mechanism so that the Department would acquire a more accurate picture of project activities, and projects would be able to make relative comparisons of their respective services and activities.

New subsection (a)(2)(B). requires the Secretary to carry out coordinated clearinghouse activities on sudden infant death syndrome, including the collection (and dissemination to the public, health and educational institutions, professional organizations, sudden infant death syndrome parent self-help organizations, and other interested parties) of information pertaining to sudden infant death syndrome and related issues such as death investigation systems, personnel training, biomedical research activities, and information on the utilization and availability of treatment or prevention procedures and techniques, such as home monitors.

The clearinghouse function would facilitate the timely dissemination of information to the public, health and welfare professionals, law enforcement officials, and other service personnel who come in contact with the families of SIDS victims.

This provision authorizes the Secretary to enter into contracts to carry out the information and the clearinghouse activities required under subsection (a).

New subsection (b)(1) authorizes the Secretary to make grants to public or nonprofit private entities, and enter into contracts with public or private entities, for projects which include both the collection, analysis, and furnishing of information (derived from post mortem examinations and other means) relating to the causes and other appropriate aspects of sudden infant death syndrome; and the provision of information and counseling to families affected by sudden infant death syndrome.

This provision continues the project grant mechanism in existing law and broadens the scope of information to be collected at the project level to include other appropriate aspects of SIDS in addition to information relating to the causes of SIDS.

New subsection (b)(2) provides that no grant may be made or contract entered into under subsection (b) unless an application therefor has been submitted to and approved by the Secretary; requires applications to be in such form, submitted in such manner, and contain such information as the Secretary prescribes by regulation; and requires each application to:

(A) provide that the project for which assistance under the subsection is sought will be administered by or under the supervision of the applicant;

(B) provide for appropriate community representation (including appropriate involvement of parent self-help groups) in the development and operation of the project;

(C) set forth such fiscal controls and fund accounting procedures as may be necessary to assure proper disbursement of and accounting for Federal funds paid to applicants under subsection (b); and

(D) provide for making reports in such form, frequency, and with information the Secretary reasonably requires, including reports that will assist in carrying out the provisions of subsection (a)(2) of section 1011 relating to periodic reporting and clearinghouse activities.

The provisions of subsection 1011 (b)(2) are essentially identical to existing law except that clause (B) is amended to specify that appropriate community representation shall include appropriate involvement of parent self-help groups, and clause (D) is amended to require project reports to include reports that will assist the Secretary in carrying out his periodic reporting and clearinghouse activities required by section 1011 (a)(2).

New subsection (b)(3) provides that payments under grants under subsection (b) may be made in advance or by way of reimbursement, and at such intervals and on such conditions, as the Secretary finds necessary—a provision identical to existing law.

New subsection (b)(4) provides that contracts under subsection (b) may be entered into without regard to sections 3648 through 3709 of the revised statutes (31 U.S.C. 529; 41 U.S.C. 5)., which require certain advertising and bid procedures, a provision identical to existing law.

New subsection (b)(5) requires the Secretary to seek to make equitable distribution of funds appropriated under part B among the various regions of the country and to insure that the needs of rural and urban areas are appropriately addressed.

This provision is not intended to change the character of the SIDS program from a project grant program to a formula grant program, but would require the Secretary to consider carefully the needs and problems peculiar to rural and urban areas, such as transportation difficulties, and lack of access to specialized services, among other problems.

New subsection (b)(6) provides for the authorization of appropriations of $7,000,000 for fiscal year 1979, $9,000,000 for fiscal year 1980, $11,000,000 for fiscal year 1981 and for each of the next two fiscal years. This increase in authorizations over the present level of $3.6 million will allow for three years of continued project expansion and improvement and two years of transition to greater reliance on community support. It would also provide adequate funding for the establishment of counseling and information projects in all the States, territories, and possessions of the United States not presently served.

Plans and Reports

Subsection (a) of new section 1012 requires that not later than February 1 of each year after 1978, the Secretary shall submit to the Senate Committee on Human Resources and the House Committee on Interstate and Foreign Commerce a comprehensive report on the administration of part B of title X (including funds and positions allocated for personnel) and the results obtained from activities thereunder, including the extent of allocations made to rural and urban areas. The report submitted on or before February 1, 1979 is also required to set forth a plan to extend counseling and information projects to the fifty States and the District of Columbia by July 1, 1979, and extend counseling and information projects to all possessions and territories of the United States by July 1, 1980.

This provision will help keep Congress informed as to (1) the advances in SIDS projects' counseling and informational activities; (2) the state of the art with respect to the clinical application of SIDS research activities; and (3) whether or not projects are moving toward finding community support. It will also ensure the development of a plan for expansion of the needed counseling and information services to all the States, territories, and possessions of the United States not presently served.

New subsection (*b*)—requires the Secretary to conduct or provide for the conduct of a study on State laws and practices relating to death investigation systems and their impact on sudden and unexplained infant deaths, any appropriate means for improving the quality, frequency, and uniformity of the post mortem examinations performed under such laws, practices, and systems in the case of sudden and unexplained infant deaths; and requires the Secretary not later than December 31, 1979, to report to the Congress the results of such study, including recommendations as to appropriate actions by HEW with respect to post mortem investigations in all cases of sudden and unexplained infant death (including the desirability and feasibility of establishing pilot projects for centralized post mortem and specimen examination systems on a statewide or regional basis).

The performance of a post mortem examination (autopsy) is vital in making a diagnosis of sudden infant death syndrome because such a determination is made only after other causes of death have been ruled out. Whether or not such an examination is performed, and whether or not that examination is of high quality is dependent upon the death investigation laws and systems in existence within the State. A comprehensive analysis of these laws and systems and their impact on sudden and unexplained infant death will provide information as to what appropriate action, if any, should be taken by HEW. The committee believes consideration should be given to the feasibility and value of establishing projects for centralized post mortem and specimen examination systems on a statewide or regional basis, and expects consideration by the Department and a report prior to the date on which the entire report is due.

Sudden Infant Death Syndrome Research and Research Reports

Subsection (*a*) *of new section 1013*—requires the Secretary, from the sums appropriated to the National Institute of Child Health and Human Development under section 441 of the PHS Act, to assure that there are applied to research of the type described in paragraph (1) (A), (B), and (C) of subsection (b) of section 1013 such amounts each year as will be adequate, given the leads and findings then available from such research, in order to make maximum feasible progress toward identification of infants at risk of sudden infant death syndrome and prevention of sudden infant death syndrome. This provision highlights the importance of the SIDS research program and the need for increased support for this rapidly advancing area of investigation over the next several years.

News subsection (*b*)(*1*)—requires the Secretary not later than ninety days after the close of fiscal year 1978 and each fiscal year thereafter, to report to the Senate and the House Committees on Appropriations, the Senate Committee on Human Resources and the House Committee on Interstate and Foreign Commerce, the information for such fiscal year on—

(A) the (i) number of applications approved by the Secretary in the fiscal year reported on for grants and contracts under the PHS Act for research which relates specifically to SIDS, (ii) total number requested under such applications, (iii) number of such applications for which funds were provided in that fiscal year, and (iv) total amount of such funds;

(B) the (i) number of applications approved by the Secretary in such fiscal year for grants and contracts under the PHS Act for research which relates generally to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in that fiscal year, and (iv) total amount of such funds; and

(C) the (i) number of applications approved by the Secretary in such fiscal year for grants and contracts under this Act for high-risk pregnancy and high-risk infancy research which relates to sudden infant death syndrome, specifying how these conditions relate to SIDS, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in that fiscal year, and (iv) total amount of such funds.

Clauses (A) and (B) are identical to the existing law requirements in Public Law 93-270 which last applied to a report due for fiscal year 1976. Clause (C) is new and is an area already being studied by researchers interested in the SIDS phenomenon. The findings from studies in the area of high-risk pregnancy and high-risk infancy are considered to have significant applicability in the eventual solution to the problem of SIDS.

New Subsection (b)(2)(A) requires that each report submitted under paragraph (1) of subsection (b) shall—

(A) contain a summary of the findings of intramural and extramural research supported by NICHD relating to SIDS as described in clauses (A), (B), and (C) of paragraph (1), and the Institute's plan for taking maximum advantage of those research leads and findings;

(B) provide information on activities underway and plans to bring about the appropriate clinical application of current research findings and the cost and implications of those applications; and

(C) provide an estimate of the need for additional funds over each of the next 5 fiscal years for grants and contracts under the PHS Act for research activities described in clauses (A), (B), and (C) of this paragraph.

Significant advances have been made in research since the enactment of Public Law 93-270 in 1974. Within the next few years information gathered from the research carried on through NICHD will be available for clinical application. This subsection is thus intended to provide for careful analysis and appropriate application and dissemination of research findings, and to provide sound data on levels of funding required so that research may be continued at an adequate level.

New subsection (c) requires the Secretary, within five days after the budget is transmitted by the President to the Congress for each fiscal year after fiscal year 1979, to transmit to the Senate and House Committees on Appropriations, the Senate Committee on Human Resources, and the House Committee on Interstate and Foreign Commerce, an estimate of the amounts requested for the NICHD and any other Institutes of the National Institutes of Health, respectively, for research relating to SIDS as described in paragraph (1)(A), (B), and (C) of this subsection, and a comparison of those amounts with the amounts requested for the preceding fiscal year. This continues on an annual basis the reporting requirements in existing law (Public Law 93-270) and, in addition, for annual reporting of research activities in the areas of high-risk pregnancy and high-risk infancy related to SIDS.

Section 3

On the effective date of the Committee bill, amends the title of title XI of the Public Health Service Act to read "Genetic Diseases and Hemophilia Programs" and repeals part B of title XI of the PHS Act (the Sudden Infant Death Syndrome Programs) and sections 1, 2, 3, and 4 of Public Law 91-572 (the Family Planning and Population Research Act of 1970), and redesignates Part C of title XI (the Hemophilia Program) as part B.

Section 4

Provides that the provisions of the Committee bill shall take effect on October 1, 1978.

AGENCY REPORTS

The committee requested reports from the Department of Health, Education, and Welfare, the General Accounting Office, and the Office of Management and Budget. As of the date of filing of this report, none of these departments had submitted a report to the committee. However, a representative of the Department of Health, Education, and Welfare testified at hearings held on legislation to extend the Family Planning Services and Population Research and the Sudden Infant Death Syndrome legislation. The HEW testimony at these hearings is printed below.

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STATEMENT BY JULIUS B. RICHMOND, M.D., ASSISTANT SECRETARY FOR HEALTH, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Mr. Chairman, members of the subcommittee: I welcome the opportunity to appear here this evening. My earlier research work involved study of the Sudden Infant Death Syndrome (SIDS)—the problem has long been of interest to me. In my years as a practicing pediatrician, I don't think I have observed any other experience which is as shattering a personal tragedy for those families, who without warning, lose their seemingly healthy babies.

I want to introduce the other Department officials with me: Dr. Joyce Lashof, Deputy Assistant Secretary for Health-Programs and Population Affairs; Dr. Norman Kretchmer, Director of the National Institute of Child Health and Human Development, National Institutes of Health; and Dr. John Marshall, Deputy Director of the Bureau of Community Health Services, Health Services Administration.

Each year in the United States, the sudden infant death syndrome claims the lives of an estimated 6,000 to 7,000 infants who die suddenly, quietly, and unexpectedly in their cribs, during what has been considered to be normal sleep. This is an incidence rate of about 2 per 1,000 live births. It is the leading cause of death between the ages of 1 and 12 months—as much as 50 percent of infant deaths occurring between the first month and first year of life in this country can be attributed to the sudden infant death syndrome.

Characteristics of SIDS

Although the cause of death for these babies remains a mystery, we have documented well the characteristics of the SIDS baby, the mother of the SIDS victim, and their environments. We consistently find that the peak incidence of SIDS—and this is true in other countries as well—is between the second and fourth months of life. We know that the risk is higher in males than in females, in black babies than in white babies, in one of twins as compared to single born babies, in low-birth-weight infants and particularly in infants whose gestational ages at time of birth were between 34 and 35 weeks, and in babies who have had recent upper respiratory infections.

Research has demonstrated that the highest rate of SIDS is among mothers less than 20 years old; the older the mother the lower the risk of sudden death for her baby. Moreover, the risk for crib death is more than four times as great for those infants whose mothers received no prenatal care in comparison to mothers beginning their prenatal care early in pregnancy.

The incidence of SIDS is highest in families of low socio-economic status. In addition, a higher rate of SIDS occurrence has been observed among infants of mothers who smoke than among infants of mothers who do not smoke. Most infants die at home in their cribs or carriages. The frequency of SIDS deaths in the United States is greatest during the cold-weather months, and between 12 midnight and 8 a.m. than during other time periods.

Public Law 93–270 authorized a Sudden Infant Death Syndrome program which includes research, development and dissemination of educational materials, counseling to families, and collection, analysis and furnishing of information relating to the causes of SIDS. I would like to describe the Department's activities in all of these areas.

Research Advances

With its emphasis on research for mothers and children, the National Institute of Child Health and Human Development has provided an ideal milieu for advances in understanding the phenomenon of the sudden infant death syndrome—a problem which it is now evident relates to the broader areas of high risk pregnancy, fetal development, the birth process, and early infancy.

The objectives of our SIDS research program are:

to increase the understanding of the causes and underlying mechanisms of the syndrome;

to identify the infants at risk of becoming victims;

to explore preventive approaches;

to elucidate the impact of a sudden and unexpected infant death on the parents, siblings and the extended family; and

to inform the scientific and general community about SIDS.

The research emphasis areas include developmental neurophysiology autonomic disturbances, and sleep state; respiratory, laryngeal, cardiac functions and responses to stimuli; metabolic, endocrine, and genetic factors; immunology and infection; epidemiology, anatomic pathorlogy; and the behavioral facets of the problem.

Since 1972, the National Institute of Child Health and Human Development has annually increased its research efforts in the sudden infant death syndrome resulting in an expanded base of knowledge about this phenomenon. As a result of Institute-supported investigations during these 6 years, it is evident that SIDS babies are not the healthy infants before death they were once believed to be. These infants appear to have subtle anatomic and physiologic defects—which may originate in-utero—of a neurologic, cardiorespiratory, or metabolic nature.

There is increasing evidence that the syndrome is not caused by a single mechanism acting at one moment in time, as previously believed. Rather, a number of developmental, environmental, and pathologic factors are involved, Under a complex set of circumstances, these interact and rapidly set up a sequence of events producing a sudden, unexpected and unexplained infant death.

Evidence that these infants have preexisting difficulties includes anatomic pathologic findings suggestive of chronic stress and hypoxia; abnormalities in sleep state, cardiorespiratory function, and tissue oxygen utilization; postnatal growth retardation; and the infant's temperament and behavioral patterns between birth and death.

Investigators are currently studying the role of many normal and abnormal phenomena to SIDS, such as development of sleep state, and cardiopulmonary regulation during sleep; interrelationships among heart rate variability, respiratory rate variability, and sleep state; the infants' ventilatory response to carbon dioxide; cardiac arrhythmias; sleep deprivation; hypoglycemia, larynogospasm; anemia in potentiating apnea; effects of acute metabolic conditions on central nervous system (CNS) development, organization, and function; CNS dysfunction above the brain stem; abnormalities of the carotid body; inability to metabolize free fatty acids; deficiencies in vitamin E or selenium; lack of secretory component of bronchopulmonary mucosa; nasal obstruction; cardio-vascular instability; the biogenic anime metabolism.

In 1977, the Institute began a cooperative case-control sudy of SIDS. About 600 cases of SIDS, as defined by an autopsy protocol developed for this study, will be investigated. Case-control comparisons for each factor under study will determine the extent of SIDS risk associated with the factor. It is anticipated that as a result of this project it will be possible to identify high-risk infants on the basis of information available of birth and in the period shortly after birth.

We have contracted for the development of an inexpensive prototype respiratory-cardiac electronic monitor for use in the home on high-risk and near-miss infants.

We expect the risk factor study to enable identification of SIDS high-risk infants at birth and in the early weeks postpartum. Home monitoring of heart and respiratory regulation during sleep will further delineate risk. The combination of risk-factor and monitoring data will make a SIDS prevention program feasible.

The 1978 budget provides funds to support research (1) to better define the time and type of developmental insult that results in SIDS, with particular attention to antecedents in fetal life, (2) to unravel the complexities of the pathophysiologic events being observed in subsequent siblings of SIDS and "near-miss" infants as clues to SIDS, and (3) to focus on the effects of infant death on parents and siblings with a beginning emphasis on the grief-guilt reaction.

The President's fiscal year 1979 budget requests $10.4 million to continue to approach the problem of SIDS through its seven identified SIDS emphasis areas, as well as through a broader research approach involving studies of high-risk pregnancy, investigations of fetal development and maturation of specific systems and research into the process of adaptation of the newborn to the extrauterine environment and subsequent health problems.

Service Projects

We are currently providing support to 32 sudden infant death syndrome informational and counseling service projects located in 27 States. Of these 29 are continuing projects and three are receiving support for their first year of operation. They provide services which are accessible to a population base of approximately 126 million. It is estimated that 54 percent of the sudden infant death syndrome deaths for 1978 will occur in geographic areas for which these projects are responsible and approximately 3,500 families will be offered assistance which includes early and periodic counseling.

Until recently only a small number of infants who die suddenly and unexpectedly were autopsied to confirm the cause of death and to learn more about the conditions contributing to the tragic event. In contrast, seventeen of our projects report an autopsy rate of 80 percent or higher. In ten projects, seven of which are statewide, virtually all infants who die suddenly and unexpectedly are autopsied.

Informational and Educational Activities

Informational and educational activities are directed at health professionals, public safety officials and others to help acquaint them with the problems faced by SIDS families as well as to educate the general public and those who may come in contact with the problem.

The three motion picture films produced in the early years of the sudden infant death syndrome program continue to be internationally used and well received. "After Our Baby Died" sensities health professionals to their responsibilities to sudden infant death syndrome families. "You Are Not Alone" was prepared for the survivors of this crisis and the public in general. Copies of these films are being used by the projects, community mental health centers, institutions of higher learning, and voluntary organizations. The film entitled "A Call For Help" instructs law enforcement officers and others who respond to emergencies in how to interact with families at the time of their crisis in a sensitive and nonaccusatory manner. This film, which was distributed by the International Association of Chiefs of Police, was booked for 459 showings in 51 States with an estimated audience in 1977 of 13,700. We have also used the television media to sensitize the public to the sudden infant death syndrome. Two brief public service telecasts were distributed in September 1977 to 300 major television stations in the United States. A report on the use of these telecasts by 200 stations indicates they were viewed in 42 States by an audience of approximately 122 million and a contributed time value of $61,604.

The publication and distribution of printed materials related to sudden infant death syndrome continues to be an important means of communicating the most recent information about this problem, its significance, causes, effects, and approaches to care. Approximately 500,000 pieces of 20 publications were distributed to a broad circle of concerned health service organizations, institutions of higher learning, health and emergency care providers, voluntary organizations and the public.

In the past year, the federally funded sudden infant death syndrome projects have conducted more than 2,000 educational programs. The interdisciplinary approach is basic to the success of the sudden infant death syndrome program. The projects also are conducting in-depth and on-going training seminars with those groups most involved with providing sudden infant death syndrome services. We think it is important to note that the topic of sudden infant death syndrome and its associated effects is becoming increasingly evident in the curricula of numerous health disciplines, emergency service providers, and law enforcement programs.

I want to mention that our contract activities have been a vital adjunct to the program. These include:

a recently completed review and analysis of State statutes affecting the medico-legal investigations of sudden, unexplained deaths in infants. Findings have been published and distributed in a publication entitled "Death Investigation: An Analysis of Laws and Policies of the United States, Each State and Jurisdiction";

a currently funded study which will provide recommendations for toxicological studies in cases of sudden infant deaths and will define the protocols for conducting the toxicological analysis;

completion of a 2-year effort to mobilize the necessary resources of sudden infant death syndrome programs in areas not presently providing these services with Federal assistance;

development of a training module suitable for basic training or in service programs for law enforcement and emergency service providers; and design and testing of a methodology for evaluation of the sudden infant death syndrome projects; the second phase of this effort will implement the evaluation study and analyze the findings.

During fiscal year 1979, with our budget request of $2,802,000 the program will continue to support information and counseling projects which will enable 4,000 families to receive early and periodic counseling—500 more families than received services this year. Eventually we hope to implement a nationwide program so that services comparable to those provided in the current project areas are available for any family affected by a sudden and unexpected infant death. The need to continually assess and improve the quality of services remains a major program objective—utilizing the outcomes and recommendations of the evaluation and toxicology studies, program monitoring activities, and research findings.

A longer range objective is to apply research findings in an orderly and timely manner so that ultimately sudden infant death syndrome deaths may be prevented. We anticipate that as the causes associated with or responsible for these deaths are identified, then prevention, screening, indentification and medical management will become a reality.

Conclusion

Mr. Chairman, you have introduced a bill, S. 2523, which proposes to extend the Sudden Infant Death Syndrome Act. We support a 3-year extension of this authority at the appropriation levels previously mentioned. We are committed to continued improvements in the quality and effectiveness of our research efforts and program activities.

Thank you for inviting me to present the Department's concerns regarding this program. My colleagues and I welcome any questions you may have.

CHANGES IN EXISTING LAW MADE BY S. 2522 AS REPORTED

In accordance with paragraph 4 of rule XXIX of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

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PUBLIC HEALTH SERVICE ACT

(U.S.C. 300 et seq.)

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TITLE X—[POPULATION RESEARCH AND VOLUNTARY FAMILY PLANNING PROGRAMS] *FAMILY PLANNING AND HUMAN DEVELOPMENT PROGRAMS*

PART A—VOLUNTARY FAMILY PLANNING AND POPULATION RESEARCH PROGRAMS

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[TITLE XI—GENETIC DISEASES, HEMOPHILIA PROGRAMS, AND SUDDEN INFANT DEATH SYNDROME][1]

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[1] In order to show changes in the text of what is now part B of title XI as it is transferred to title X as part B, the title of title XI is shown both before and after the SIDS part B material.

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PART B—SUDDEN INFANT DEATH SYNDROME *Programs*

SUDDEN INFANT DEATH SYNDROME COUNSELING, INFORMATION, EDUCATIONAL, AND STATISTICAL PROGRAMS

SEC. [1121.] *1011.* (a)(*1*) The Secretary, through *an identifiable administrative unit under the supervision of* the Assistant Secretary for Health, shall carry out a program to develop public information and professional educational materials relating to sudden infant death syndrome, and to disseminate such information and materials to persons providing health care, to public safety officials, and to the [public generally.] *general public. The Secretary shall adminster, through such unit, the functions assigned in this section and section 1012, and shall provide such unit with such full-time professional and clerical staff and with the services of such consultants and of such management and supporting staff as may be necessary for it to carry out such functions effectively.*

(2) The Secretary shall—

(A) develop and implement a system for the periodic reporting to the Department, and dissemination by the Department, of information collected under grants and contracts made under subsection (b)(1) of this section; and

(B) carry out coordinated clearinghouse activities on sudden infant death syndrome, including the collection and dissemination to the public, health and educational institutions, professional organizations, and other interested parties of information pertaining to

sudden infant death syndrome and related issues such as death investigation systems, personnel training, biomedical research activities, and information on the utilization and availability of treatment or prevention procedures and techniques, such as home monitors. The Secretary is authorized to enter into contracts with public or private entities to carry out the information and clearinghouse activities required under this subsection.

(b)(1) The Secretary **[**may**]** *is authorized to* make grants to public **[**and**]** *or* nonprofit private entities, and enter into contracts with public **[**and**]** *or* private entities, for projects which include both—

(A) the collection, analysis, and furnishing of information (derived from post mortem examinations and other means) relating to the causes *and other appropriate aspects* of sudden infant death syndrome; and

(B) the provision of information and counseling to families affected by sudden infant death syndrome.

(2) No grant may be made or contract entered into under this subsection unless an application therefor has been submitted to and approved by the Secretary. Such application shall be in such form, submitted in such manner, and contain such information as the Secretary, shall by, regulation prescribe. Each application shall—

(A) provide that the project for which assistance under this subsection is sought will be administered by or under *the* supervision of the applicant;

(B) provide for appropriate community representation (*including appropriate involvement of parent self-help groups*) in the development and operation of such project;

(C) set forth such fiscal controls and fund accounting procedures as may be necessary to assure proper disbursement of and accounting for Federal funds paid to the applicant under this subsection; and

(D) provide for making such reports in such form, *at such times*, and containing such information as the Secretary may reasonably **[**require.**]** *require, including such reports as will assist in carrying out the provisions of subsection (a)(2) of this section.*

(3) Payments under grants under this subsection may be made in advance or by way of reimbursement, and at such intervals and on such conditions, as the Secretary finds necessary.

(4) Contracts under this subsection may be entered into without regard to sections 3648 through 3709 of the Revised Statutes (31 U.S.C. 529; **[**44**]** *41* U.S.C. 5).

(5) The Secretary shall seek to make equitable distribution of funds appropriated under this part among the various regions of the country and to ensure that the needs of rural and urban areas are appropriately addressed.

[5**]** *(6)* For the purpose of making grants and contracts under this section, there are authorized to be appropriated $2,000,000 for the fiscal year ending **[**1975,**]** *June 30, 1975;* $3,000,000 for the fiscal year ending **[**1976, and**]** *June 30, 1976;* $4,000,000 for **[**the ending September 30, 1977, and $3,650,000 for the fiscal year ending September 30, 1978**]** *fiscal year 1977; $3,650,000 for fiscal year 1978; $7,000,000 for fiscal year 1979; $9,000,000 for fiscal year 1980; and $11,000,000 for fiscal year 1981 and each of the two succeeding fiscal years.*

[(c) The Secretary shall submit, not later than January 1, 1976, a comprehensive report to the Committee on Labor and Public Welfare of the Senate and the Committee on Interstate and Foreign Commerce of the House of Representatives respecting the administration of this section and the results obtained from the programs authorized by it.]

PLANS AND REPORTS

SEC. 1012. (a) Not later than February 1 of each year after 1978, the Secretary shall submit to the Committee on Human Resources of the Senate and the Committee on Interstate and Foreign Commerce of the House of Representatives a comprehensive report on the administration of this part (including funds and positions allocated for personnel) and the results obtained from activities thereunder, including the extent of allocations made to rural and urban areas. The report submitted on or before February 1, 1979, shall also set forth a plan to—

(1) extend counseling and information projects to the fifty States and the District of Columbia by July 1, 1979; and

(2) extend counseling and information projects to all possessions and territories of the United States by July 1, 1980.

(b) The Secretary shall conduct or provide for the conduct of a study on State laws, practices, and systems relating to death investigation and their impact on sudden and unexplained infant deaths, and any appropriate means for improving the quality, frequency, and uniformity of the post mortem examinations performed under such laws, practices, and systems in the case of sudden and unexplained infant deaths. Not later than December 31, 1979, the Secretary shall report to the Congress the results of such study, including recommendations as to any appropriate actions by the Department of Health, Education, and Welfare with respect to the conduct of post mortem investigations in all cases of sudden and unexplained infant death (including the desirability and feasibility of establishing pilot projects for centralized post mortem and specimen examination systems on a Statewide or regional basis).

SUDDEN INFANT DEATH SYNDROME RESEARCH AND RESEARCH REPORTS

SEC. 1013. (a) From the sums appropriated to the National Institute of Child Health and Human Development under section 441, the Secretary shall assure that there are applied to research of the type described in paragraph (1) (A), (B), and (C) of subsection (b) of this section such amounts each year as will be adequate, given the leads and findings then available from such research, in order to make maximum feasible progress toward identification of infants at risk of sudden infant death syndrome and prevention of sudden infant death syndrome.

(b)(1) Not later than ninety days after the close of fiscal year 1978 and of each fiscal year thereafter, the Secretary shall report to the Committees on Appropriations of the Senate and the House of Representatives, the Committee on Human Resources of the Senate, and the Committee on Interstate and Foreign Commerce of the House of Representatives specific information for such fiscal year on—

(A) the (i) number of applications approved by the Secretary in the fiscal year reported on for grants and contracts under this Act for research which relates specifically to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds;

(B) the (i) number of applications approved by the Secretary in such fiscal year for grants and contracts under this Act for research which relates generally to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds; and

(C) the (i) number of applications approved by the Secretary in such fiscal year for grants and contracts under this Act for high-risk pregnancy and high-risk infancy research which relates to sudden infant death syndrome, specifying how these conditions relate to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds.

(2) Each report submitted under paragraph (1) of this subsection shall—

(A) contain a summary of the findings of intramural and extramural research supported by the National Institute of Child Health and Human Development relating to sudden infant death syndrome as described in clauses (A), (B), and (C) of such paragraph (1), and the plan of such Institute for taking maximum advantage of such research leads and findings;

(B) provide information on activities underway and plans to bring about the appropriate clinical application of current research findings and the cost and implications of such applications; and

(C) provide an estimate of the need for additional funds over each of the next five fiscal years for grants and contracts under this Act for research activities described in such clauses.

(c) Within five days after the Budget is transmitted by the President to the Congress for each fiscal year after fiscal year 1979, the Secretary shall transmit to the Committees on Appropriations of the Senate and the House of Representatives, the Committee on Human Resources of the Senate, and the Committee on Interstate and Foreign Commerce of the House of Representatives an estimate of the amount requested for the National Institute of Child Health and Human Development and any other Institutes of the National Institutes of Health, respectively, for research relating to sudden infant death syndrome as described in paragraph (1) (A), (B), and (C) of subsection (b) of this section, and a comparison of such amounts with the amounts requested for the preceding al year.

TITLE XI—GENETIC DISEASES AND HEMOPHILIA PROGRAMS

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PART **[**C**]***B*—HEMOPHILIA PROGRAMS

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